

City of La Quinta Noise Ordinance

The City of La Quinta Municipal Code Section 9.100.210, Noise Control, establishes base ambient noise level limits for noise sensitive and other non-residential uses based on time of day. **Table III-28** below shows the exterior noise limits established by the City. Noise sensitive land uses include residential uses, schools, hospitals, churches, daycare, and similar uses. All other uses must comply with the “Other Non-Residential” standard.

Table III-28
Exterior Noise Limits

Noise level that may not be exceeded for a cumulative period more than...	Noise Standard at Affected Land Use			
	Noise Sensitive		Other Non-residential	
	Daytime 7 a.m. – 10 p.m.	Nighttime 7 a.m. – 10 p.m.	Daytime 7 a.m. – 10 p.m.	Nighttime 7 a.m. – 10 p.m.
30 min/hr	60 dBA	50 dBA	75 dBA	65 dBA
15 min/hr	65 dBA	55 dBA	80 dBA	70 dBA
5 min/hr	70 dBA	60 dBA	85 dBA	75 dBA
1 min/hr	75 dBA	65 dBA	90 dBA	80 dBA
Anytime	80 dBA	70 dBA	95 dBA	85 dBA
Note: For the purposes of this section, the term “cumulative period” means the number of minutes that a noise occurs within any hour, whether such minutes are consecutive or not.				
Source: “City of La Quinta General Plan Update Noise Element Technical Report, Urban Crossroads, June 3, 2011.				

The Municipal Code also establishes limits on construction activity during the day. Construction noise is considered temporary, but can often be disruptive for surrounding land uses. Section 6.08.050 of the Municipal Code limits construction to the following hours:

October 1st through April 30th: Monday – Friday: 7:00 a.m. to 5:30 p.m.
 Saturday: 8:00 a.m. to 5:00 p.m.
 Sunday and Holidays: None

May 1st through September 30th: Monday – Friday: 6:00 a.m. to 7:00 p.m.
 Saturday: 8:00 a.m. to 5:00 p.m.
 Sunday and Holidays: None

In addition, the Municipal Code Section 9.100.220 states, “No use, except a temporary construction operation, shall be permitted which generates inherent and recurrent ground vibration perceptible, without instruments, at the boundary of the lot on which the use is located.”

Existing Noise Level Measurements in the General Plan Area

The existing noise environment in the City was determined by both short-term and long-term noise level monitoring. There were thirteen short-term measurements conducted near major noise

sources throughout the Planning Area. These short-term measurements were monitored for a minimum time period of ten-minutes. Table III-29 below shows the results of the short-term monitoring. Short-term noise levels ranged between 57.7 dBA Leq and 69.3 dBA Leq. When expressed in terms of the 24-hour CNEL noise level, the noise levels ranged from 61.5 dBA CNEL to 72.9 dBA CNEL. Data provided by Table III-29 shows elevated short-term exterior ambient noise levels above 65 dBA CNEL at locations near residential uses and schools, including locations S7 and S9.

Table III-29
Existing (Ambient) Short-Term Noise Level Measurements

Receptor Location¹	Description	Time of Measurement	Primary Noise Source	Noise Levels (Leq dBA)	Noise Levels (dBA CNEL)
S1	Located 100 feet from the Washington Street centerline north of the Fred Waring Drive intersection.	3:00 p.m.	Traffic on Washington Street	66.1	68.4
S2	Located near the Jefferson Street and Fred Waring Drive intersection at an existing Walgreens.	3:17 p.m.	Traffic on Jefferson St. and Fred Waring Dr.	69.3	72.9
S3	Located near the Eisenhower Health center east of the Washington Street centerline.	3:43 p.m.	Traffic on Washington Street	69.3	71.6
S4	Located near the School District Offices at the intersection of 48th Avenue and Dune Palms Road.	4:11 p.m.	Traffic on Avenue 48	66.5	67.1
S5	Located approximately 100 feet east of the Jefferson Street centerline north of the 50th Avenue intersection at the existing commercial center.	10:27 a.m.	Traffic on Jefferson St.	64.3	68
S6	Located 50 feet east of the centerline in the front yard of 51915 Avenue Bermudas across from the community park south of the 52 nd Avenue intersection.	11:12 a.m.	Traffic on Avenue Bermudas	66.2	71.3
S7	Located south of 52nd Avenue at the Cahuilla Desert Academy School.	11:55 a.m.	Traffic on 52nd Avenue	62	66.6

Table III-29
Existing (Ambient) Short-Term Noise Level Measurements

Receptor Location¹	Description	Time of Measurement	Primary Noise Source	Noise Levels (Leq dBA)	Noise Levels (dBA CNEL)
S8	Located adjacent to the single-family homes near the intersection of Avenue Bermudas and Calle Arroba.	11:29 a.m.	Traffic on Avenue Bermudas	59.2	64.3
S9	Located east of Madison Street at the Troon Way intersection near existing single-family homes.	1:10 p.m.	Traffic on Madison Street	64.4	67.5
S10	Located 100 feet west of the Harrison Street centerline south of the Airport Blvd. intersection.	12:16 p.m.	Traffic on Harrison Street	62.1	65.7
S11	Located north of 50th Avenue centerline at the existing Boy and Girls Club.	10:46 a.m.	Traffic on 50th Avenue	57.7	61.5
S12	Located 50 feet east of the Monroe Street centerline south of the 60th Avenue intersection and the existing residential uses.	12:40 p.m.	Traffic on Monroe Street	60.4	64
S13	Located 100 feet west of the Jefferson Street centerline between 52 nd and 54th Avenue at the proposed residential uses.	1:30 p.m.	Traffic on Jefferson Street	66.7	71
Source: City of La Quinta General Plan Update Noise Element Technical Report,” prepared by Urban Crossroads, Inc., June 3, 2011					
1. See Exhibit III-13 for the location of the monitoring sites.					

In addition, seven long-term measurements were conducted near sensitive land uses throughout the Planning Area. Long-term noise measurements were monitored for a 24-hour period to assess ambient hourly noise levels. A summary of long term measurements is shown in Table III-30,. Hourly noise levels at these locations ranged between 43.1 dBA Leq to 72.6 dBA Leq; the weighted 24-hour noise levels ranged from 58.9.5 dBA CNEL to 72.7 dBA CNEL. Data indicate that traffic peak hours generally resulted in the highest noise levels. Data provided in Table III-30 shows elevated long-term exterior ambient noise levels above 65 dBA CNEL at site L7, which is located near single-family homes at the intersection of Jackson Street and 50th Avenue.

Table III-30
Existing (Ambient) 24-hour Noise Level Measurements

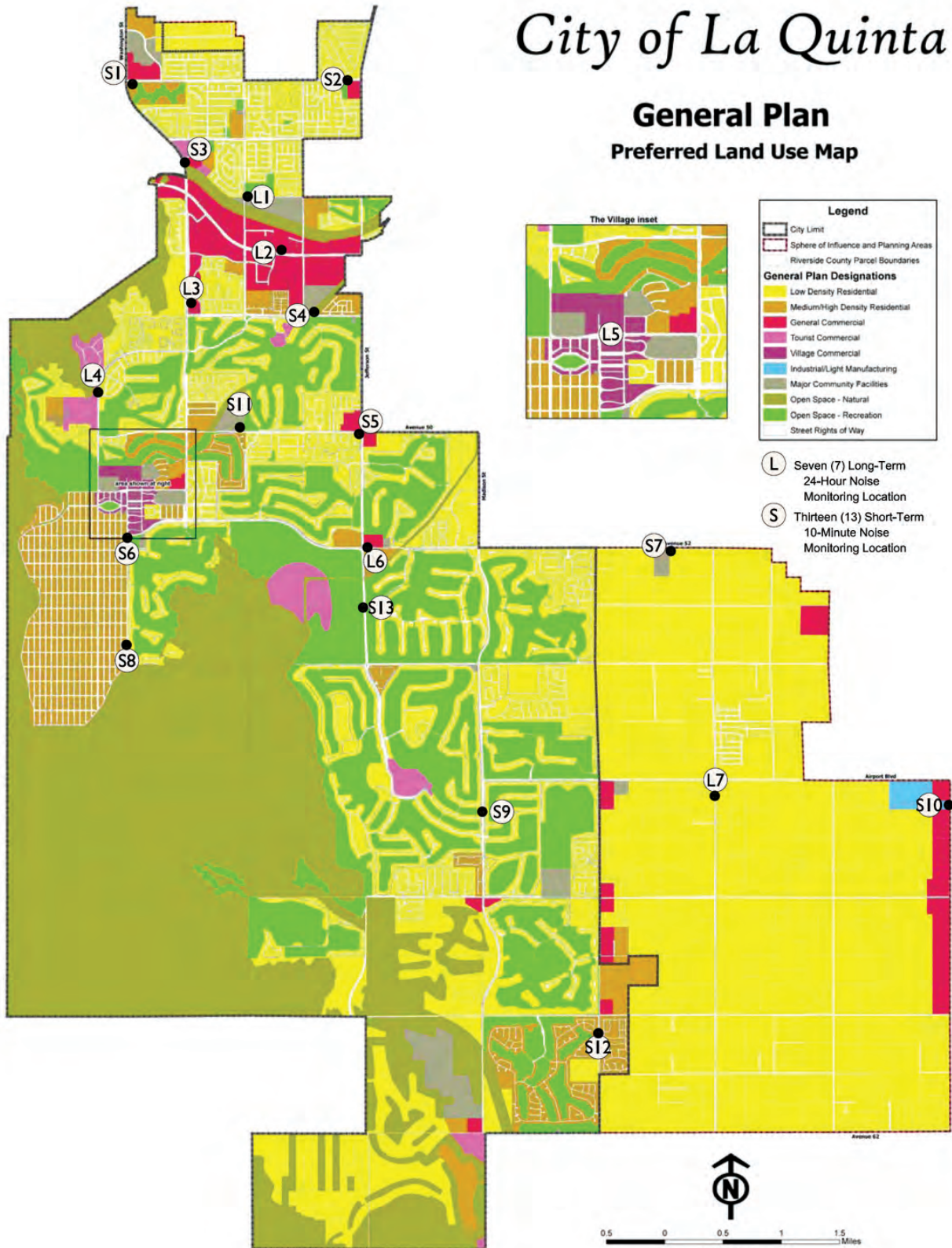
Receptor Location¹	Description	Time of Measurement	Primary Noise Source	Hourly Noise Levels (Leq dBA)	Daily Noise Levels (dBA CNEL)
L1	Located north of Westward Ho Drive at La Quinta Park across from the La Quinta High School baseball fields.	February 2-3, 2011	Traffic on Westward Ho Drive, Park Activities, Activities at La Quinta High School	44.9 - 63.6	60.2
L2	Located north of Highway 111 on southern portion of the commercial center west of La Quinta Dr.	February 2-3, 2011	Traffic on Highway 111	50.4 - 64.1	65.3
L3	Located near the Washington St. and Via Marquessa intersection adjacent to existing medical offices.	February 2-3, 2011	Traffic on Washington Street	58.1 - 71.6	72.7
L4	Located north of Coachella Drive and Eisenhower Drive intersection at the Legacy Villas.	February 2-3, 2011	Traffic on Eisenhower Drive, Ambient	47.6 - 56.1	59.3
L5	Located next to the Crab Pot Restaurant on Avenida La Fonda in "The Village".	February 2-3, 2011	Traffic on Ave. La Fonda, Ambient within The Village	43.1 - 65.4	58.9
L6	Located northeast of the 52nd Avenue and Jefferson Street intersection at land uses proposed as multifamily residential.	February 2-3, 2011	Traffic on 52nd Ave. and Jefferson St.	48.7 - 60.3	62.2
L7	Located on the northeast corner of Jackson Street and 50 th Avenue near existing single-family homes.	February 2-3, 2011	Traffic on Jackson St.	52.6 - 72.6	71.4

Source: City of La Quinta General Plan Update Noise Element Technical Report," prepared by Urban Crossroads, Inc., June 3, 2011

1. See Exhibit III-13 for the location of the monitoring sites.

City of La Quinta

General Plan Preferred Land Use Map



Source: City of La Quinta General Plan Update Noise Element Technical Report, Urban Crossroads June 3, 2011

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City of La Quinta General Plan EIR
Noise Monitoring Locations in the Study Area
La Quinta, California



Exhibit

III-13

Primary Noise Sources

As discussed earlier, existing noise sources in La Quinta are generally associated with motor vehicle traffic. This includes truck traffic and noise generated from local buses. Other noise sources throughout the Planning Area include air traffic generated from the Jacqueline Cochran Regional Airport and Bermuda Dunes Airport, noise from commercial and local business operations, including truck loading and operation of mechanical equipment, and construction noise, which impacts development in proximity to the construction activities and equipment. Each of these noise sources is discussed categorically, below.

Motor Vehicle Noise

Motor vehicle traffic is the largest noise generator throughout the General Plan Update Planning Area, particularly in the urbanized portions of the City Limit. The level of noise depends on volume of traffic, vehicular speed, and number of trucks in the flow of traffic. Engine vibration, vehicle tires, and vehicle exhaust systems also affect noise levels. Therefore, roads with heavier traffic volumes, higher speeds, and larger mix of trucks will generally have high noise levels. Table III-31 shows the traffic flow distribution on select roadway types in La Quinta, including Eisenhower Drive, which represents a Primary Roadway, Washington Street, which represents a Major roadway, and Highway 111. Highway 111 generally has the highest percentage of medium and heavy truck use, and Washington Street the highest percentage of automobiles. Traffic volumes along each selected roadway are greatest during daytime hours, or between 7 am and 7 pm.

**Table III-31
City of La Quinta Hourly Traffic Flow Distribution**

Motor-Vehicle Type	Daytime (7 am to 7 pm)	Evening (7 pm to 10 pm)	Night (10 pm to 7 am)	Total % Traffic Flow
<u>Collector, Secondary, Primary¹</u>				
Automobiles	76.8%	12.9%	10.3%	95.42%
Medium Trucks	84.1%	6.8%	9.1%	3.37%
Heavy Trucks	79.4%	4.8%	15.9%	1.21%
<u>Major, Augmented Major²</u>				
Automobiles	81.4%	10.4%	8.2%	96.05%
Medium Trucks	86.7%	5.3%	8.0%	2.65%
Heavy Trucks	89.2%	3.4%	7.3%	1.30%
<u>Highway-111³</u>				
Automobiles	73.4%	9.7%	16.9%	91.40%
Medium Trucks	80.3%	5.5%	14.2%	6.49%
Heavy Trucks	71.7%	6.5%	21.8%	2.11%

Source: City of La Quinta General Plan Update Noise Element Technical Report," prepared by Urban Crossroads, Inc., June 3, 2011

¹ Based on axle counts on Eisenhower Drive between Calle Nogales and Calle Chihuahua, a Primary roadway on February 15-16, 2011.

² Based on axle counts on Washington Street between Avenue 48 and Avenue 50, a Major roadway on February 15-16, 2011.

³ Based the Caltrans District 8 2009 Annual Average Daily Truck Traffic Report.

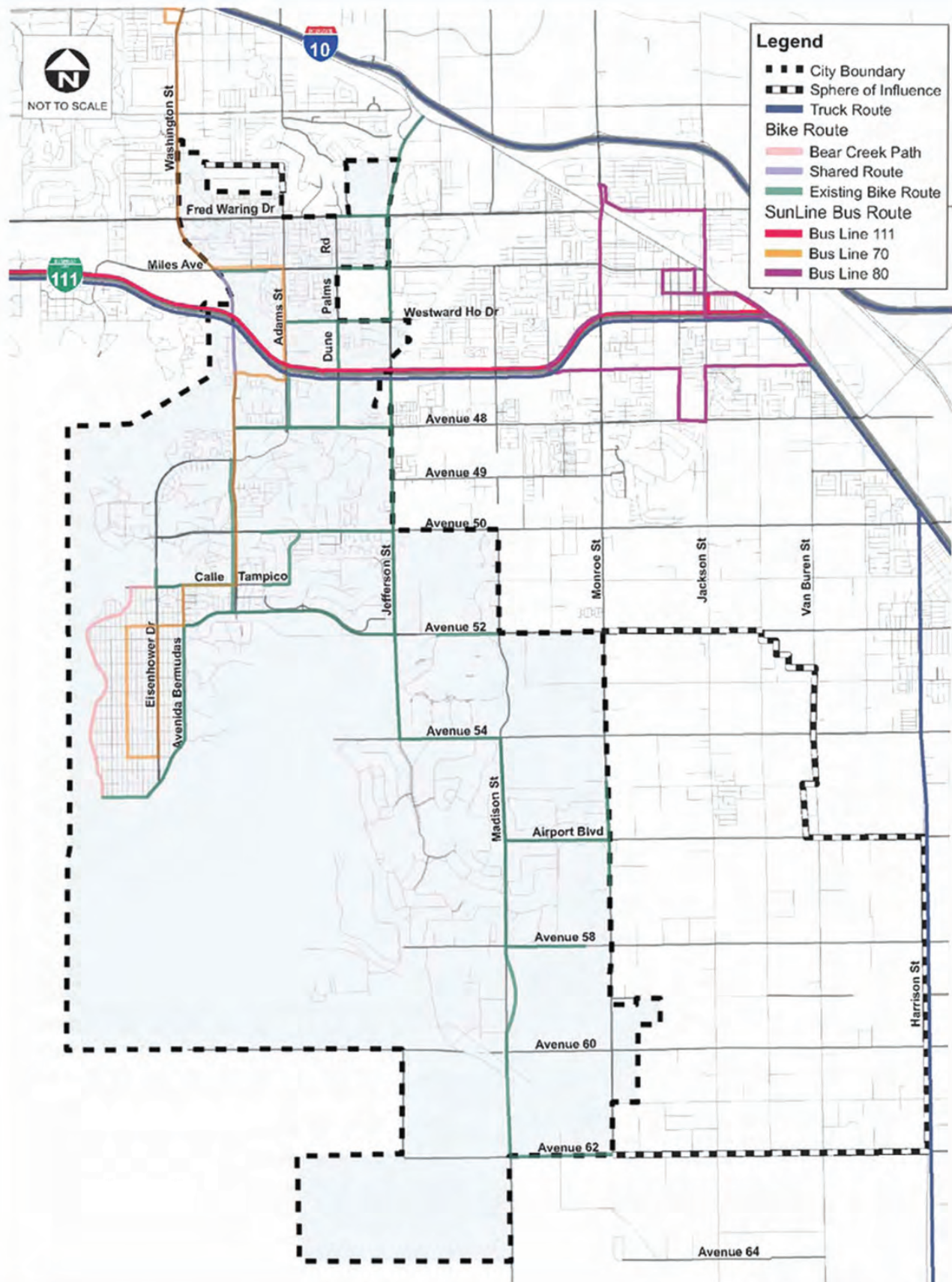
Existing noise levels along major roadways in the General Plan Update Planning Area are shown on Table III-32. These levels were determined based on modeling that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model FHWA-RD-77-108. The FHWA Model calculates predicted noise levels through adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments account for roadway classification, roadway width, the total average daily traffic (ADT), percentage of total ADT that flows each hour in a 24-hour period, travel speed, roadway grade, angle of view, percentage of vehicle types, including automobiles, medium trucks, and heavy trucks, and site conditions. Results are weighted for a 24-hour period and then expressed as CNEL.

Noise contours provided in Table III-32 were calculated using “soft-site” conditions in order to account for the effective noise attenuation over natural surfaces such as normal earth and ground vegetation. As mentioned above, noise drops off at a rate 4.5 dBA per doubling of distance over soft ground, as compared to 3.0 dBA per doubling of distance over hard ground, such as concrete, stone, or hard-packed earth. Existing contours provided in the table represent a conservative estimate, and do not account for noise barriers, topography, or roadway grades that may affect ambient noise levels.

As shown in Table III-32, many of the Planning Area’s major roadways, including Highway 111, Washington Street, Jefferson Street, Avenue 44, and Avenue 48, have existing noise levels exceeding 65 dBA CNEL at 100 feet from centerline. Many of these roads pass near sensitive land uses, such as residential neighborhoods, churches, and schools. Highway 111 is the only roadway not located along sensitive land uses. Noise barriers, such as walls or berms, can help reduce noise levels by 10 to 15 decibels, providing relief from traffic noise. In most cases, noise walls separate residential uses from roadways.

Truck and Bus Routes

As mentioned above, higher volumes of heavy trucks and buses along roadways generally increases noise impacts. Noise impacts from heavy trucks and buses are generated from braking systems, shifting gears, and engine noise during acceleration. Exhibit III-14 shows existing bus and truck routes throughout the Planning Area. Bus service throughout La Quinta is focused along travel ways with regional links, and is concentrated along Highway 111, Washington Street, and in portions of the Cove. Currently, there are no bus routes in the far southern portions of the City or Sphere.



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City of La Quinta General Plan EIR
Existing Truck and Bus Routes
La Quinta, California



Exhibit

III-14

Table III-32
Existing Noise Exposure Adjacent to General Plan Update Study Area Roadways

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet) from centerline			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Washington St.	n/o Fred Waring Dr.	70.8	113	243	524	1,128
Washington St.	btwn Fred Waring & Miles	71.1	119	257	553	1,192
Washington St.	btwn Miles & Hwy 111	70.2	104	223	481	1,036
Washington St.	btwn Hwy 111 & Avenue 48	70.7	111	240	517	1,114
Washington St.	btwn Avenue 48 & Eisenhower Dr	70.3	105	226	486	1,047
Washington St.	btwn Eisenhower Dr & Avenue 50	69.4	91	196	423	910
Washington St.	btwn Avenue 50 & Calle Tampico	68.8	83	178	383	826
Eisenhower Dr.	btwn Washington St & Avenue 50	65.4	RW	107	230	496
Eisenhower Dr.	btwn Avenue 50 & Calle Tampico	64.6	RW	94	203	438
Avenida Bermudas	btwn Calle Tampico & Avenue 52	58.5	RW	RW	80	172
Avenida Bermudas	btwn Avenue 52 & Calle Durango	62.9	RW	73	156	337
Adams St.	btwn Westward Ho Dr & Hwy 111	64.6	44	94	203	437
Adams St.	btwn Hwy 111 & Avenue 48	64.0	RW	86	186	401
Dune Palms Rd.	btwn Westward Ho Dr & Hwy 111	62.9	RW	73	156	337
Dune Palms Rd.	btwn Hwy 111 & Avenue 48	62.5	RW	68	146	314
Jefferson St.	n/o Fred Waring	68.3	77	165	355	765
Jefferson St.	btwn Fred Waring & Miles	68.8	83	180	387	833
Jefferson St.	btwn Miles & Westward Ho Dr	68.3	77	166	357	768
Jefferson St.	btwn Westward Ho Dr & Hwy 111	69.4	91	196	422	910
Jefferson St.	btwn Hwy 111 & Avenue 48	69.4	91	195	420	905
Jefferson St.	btwn Avenue 48 & Avenue 50	69.4	91	196	423	911
Jefferson St.	btwn Avenue 50 & Avenue 52	67.1	64	139	299	645
Jefferson St.	btwn Avenue 52 & Avenue 54	66.0	RW	116	251	540
Madison St.	btwn Avenue 50 & Avenue 52	62.2	RW	65	139	300
Madison St.	btwn Avenue 54 & Airport Blvd	64.3	RW	90	193	416
Madison St.	btwn Airport Blvd & Avenue 58	62.7	RW	70	150	324
Madison St.	btwn Avenue 58 & Avenue 60	58.5	RW	RW	79	170
Monroe St.	btwn Avenue 52 & Avenue 54	59.6	RW	RW	94	203
Monroe St.	btwn Avenue 54 & Airport Blvd	58.7	RW	RW	81	176
Jackson St.	btwn Avenue 54 & Airport Blvd	59.9	RW	RW	98	211
Jackson St.	btwn Airport Blvd & Avenue 58	58.3	RW	RW	77	166
Jackson St.	btwn Avenue 58 & Avenue 60	57.0	RW	RW	63	136
Jackson St.	btwn Avenue 60 & Avenue 62	56.6	RW	RW	59	128
Van Buren St.	btwn Avenue 52 & Avenue 54	61.3	RW	57	122	264
Van Buren St.	btwn Avenue 54 & Airport Blvd	59.9	RW	RW	98	211
Van Buren St.	btwn Airport Blvd & Avenue 58	56.3	RW	RW	57	122
Van Buren St.	btwn Avenue 58 & Avenue 60	55.3	RW	RW	RW	105
Van Buren St.	btwn Avenue 60 & Avenue 62	53.3	RW	RW	RW	77

Table III-32
Existing Noise Exposure Adjacent to General Plan Update Study Area Roadways

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet) from centerline			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Harrison St.	btwn Airport Blvd & Avenue 58	63.3	RW	77	166	358
Avenue 44	e/o Washington St	68.5	80	172	370	797
Miles Ave.	e/o Washington St	64.6	RW	93	201	434
Hwy 111	e/o Washington St	72.8	153	331	712	1,535
Hwy 111	e/o Adams St	73.0	159	343	738	1,590
Hwy 111	e/o Dune Palms	73.9	181	390	840	1,809
Avenue 48	e/o Washington St	65.7	52	112	241	520
Avenue 48	w/o Jefferson St	67.3	66	142	305	658
Avenue 50	e/o Washington St	64.4	RW	91	197	424
Avenue 50	w/o Jefferson St	64.5	RW	92	199	429
Avenue 50	e/o Jefferson St	64.6	RW	94	203	438
Calle Tampico	btwn Eisenhower Dr & Avenida Bermudas	61.9	RW	62	134	289
Calle Tampico	btwn Avenida Bermudas & Washington St	64.7	RW	95	204	440
Avenue 52	w/o Washington St	66.7	60	130	280	603
Avenue 52	w/o Jefferson St	65.9	54	116	249	537
Avenue 52	e/o Jefferson St	64.8	RW	96	208	448
Avenue 52	e/o Madison St	63.2	RW	76	164	354
Avenue 54	e/o Jefferson St	63.9	RW	84	181	390
Avenue 54	w/o Madison St	62.4	RW	67	145	312
Airport Blvd.	e/o Madison St	57.4	RW	RW	67	145
Avenue 58	w/o Monroe St	56.6	RW	RW	60	129
Avenue 58	e/o Monroe St	55.1	RW	RW	47	102
Avenue 60	e/o Madison St	58.1	RW	RW	75	161
Avenue 60	e/o Monroe St	54.0	RW	RW	RW	85
Avenue 62	btwn Madison St & Monroe St	53.3	RW	RW	RW	78
Avenue 62	e/o Monroe St	52.3	RW	RW	RW	66
Avenue 62	e/o Jackson St	50.7	RW	RW	RW	52
Avenue 62	e/o Van Buren St	52.6	RW	RW	RW	69
Source: City of La Quinta General Plan Update Noise Element Technical Report," prepared by Urban Crossroads, Inc., June 3, 2011						
1 "RW" = Location of the respective noise contour falls within the right-of-way of the road						

Aircraft Noise

Two sources of aircraft noise have the potential to affect the noise environment in the City and Sphere: the Jacqueline Cochran Regional Airport, and the Bermuda Dunes Airport. Each is described individually below.

Jacqueline Cochran Regional Airport

The Jacqueline Cochran Regional Airport is a small regional airport located east of Harrison Street, the eastern border of the Sphere of Influence. The airport houses approximately 127 aircraft, mostly single-engine airplanes, and air traffic consists of local flights or transients from other small airports. As of December 2006, there were an average of 209 operations (takeoffs/landings) a day, or over 70,000 annually. Of these operations, approximately 62% were associated with transient general aviation.⁵⁴

Lands adjacent to the airport are generally vacant and are under County of Riverside jurisdiction and zoned for airport, industrial and agricultural uses.⁵⁵ Although overflights may occasionally be audible within the General Plan Update Planning Area, these impacts are not considered significant. As shown on Exhibit III-15, aircraft noise does not generate a significant noise impact. The noise contours of 65 dBA or greater are contained within the airport's boundaries.

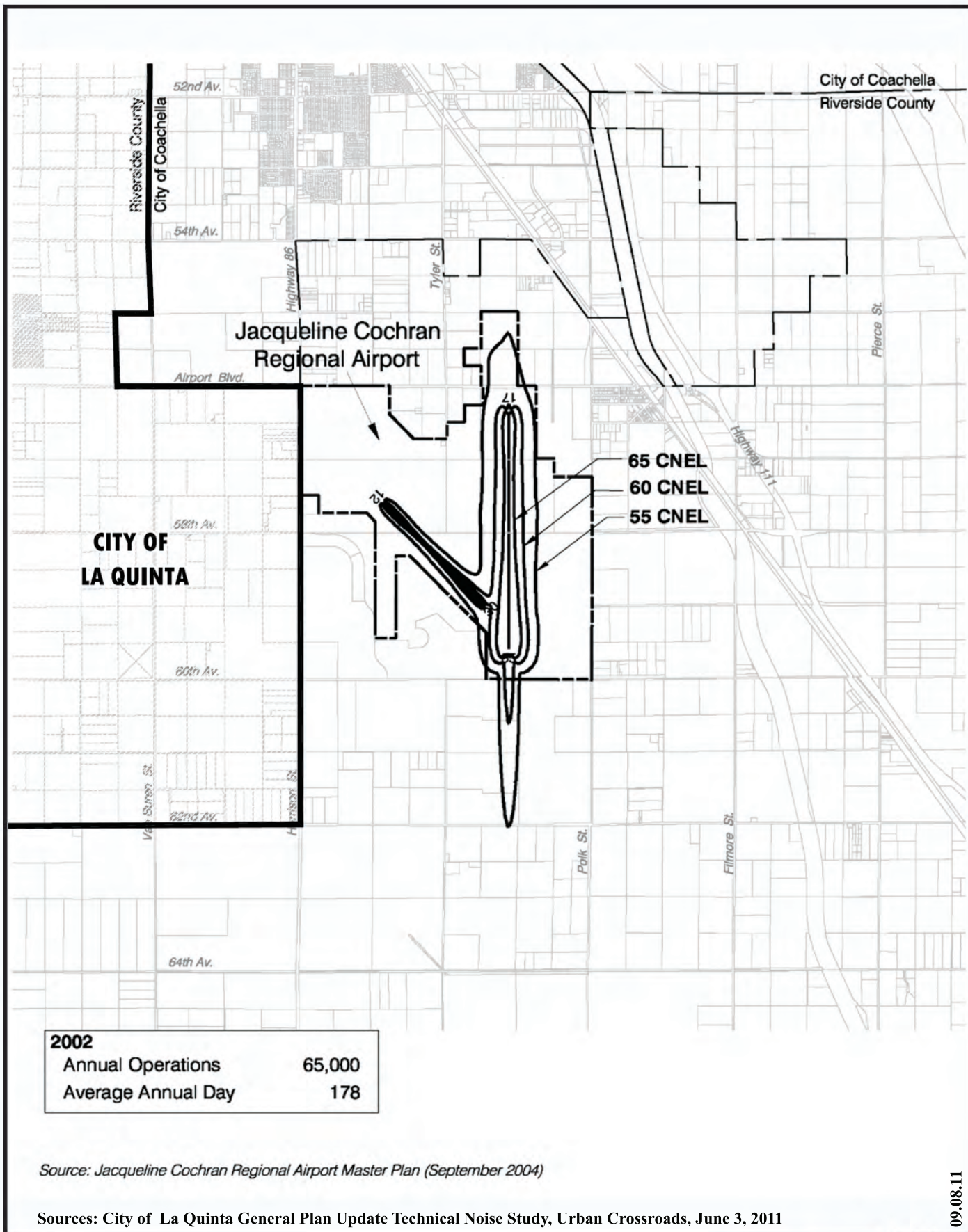
Bermuda Dunes Airport

The Bermuda Dunes Airport is a small privately owned commuter airport located approximately two miles north of the northern City limits and Sphere of Influence. The airport lies just south of Interstate 10, and west of Jefferson Street in Bermuda Dunes. The Bermuda Dunes Airport has one east-west runway measuring approximately 5,000 feet in length. The airport averages approximately 110 flights a day. Land uses surrounding the airport include residential, industrial and commercial uses associated with the airport. According to the Riverside County Airport Land Use Compatibility Plan, existing noise contours of 65 dBA or greater are contained within the airport's boundaries.⁵⁶

⁵⁴ "Airport Operation Statistics," Jacqueline Cochran Airport, <http://www.rcjra.com/AirportInformation/AirportStatistics/tabid/77/Default.aspx>, accessed July 12, 2011.

⁵⁵ As shown on Figure 3.20 "Final Draft Eastern Coachella Valley Area Land Use Plan," Riverside County General Plan, 2003.

⁵⁶ "East County Airports Background Data: Bermuda Dunes and Environs," Riverside County ALUCP, December, 2004.



Industrial and Commercial Noise

Industrial and commercial noise is generally associated with loading dock operations, trucks entering and leaving commercial and industrial districts, and interior and exterior mechanical equipment uses. These types of noises can have a varying degree of impact on adjacent land uses. Land use compatibility issues may arise when residential development is located adjacent to commercial/industrial areas, which generates noise from air conditioning units, truck deliveries and the use of mechanical equipment. All land uses are required to comply with exterior noise levels set forth in the City's Municipal Code, as discussed above.

Construction Noise

Noise from construction activity is generated from construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators. Increases to the ambient noise environment from construction activities are short-term but can reach high levels, especially from grading activities. Noise levels from heavy equipment can range between approximately 68 dBA to 100 dBA at a distance of 50 feet. These noise levels diminish rapidly with a doubling of distance from the noise source at a rate of approximately 6 dBA per doubling distance.⁵⁷

The City does not have construction noise standards; however, construction noise can be most effectively controlled through compliance with locally established construction hours. As discussed above, the Municipal Code has established day and time restrictions on construction activities.

Ground-borne Vibration and Ground-borne Noise Levels

Ground-born vibration and noise is generally associated with construction activity, such as pile driving and grading, but is also generated from traffic. Vibration is defined as the periodic movement of mass over time, and is described in units of velocity (inches per second). It is discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. The human threshold of perception for vibration is 65 Vdb, or 0.0018 inches/second, and is not usually significant until 70 Vdb, or 0.0031 inches/second. Typical levels of ground vibration range between 50 Vdb and 100 Vdb. Vibration caused by bus and heavy truck traffic, for example, is generally around 65 Vdb. In comparison, construction related vibration can range between 90 Vdb and 100 Vdb. Blasting from construction projects, for example, can be as high as 100 Vdb. The effects of ground-borne vibration generally include movement of building floors, rattling of windows, and rumbling sounds. Ground-borne vibrations associated with construction and traffic attenuate rapidly as one moves away from the source. According to Caltrans, vibration caused by truck traffic attenuates to below perception levels at distances greater than 130 feet.⁵⁸

In order to minimize impacts from ground-borne vibration and noise, future noise sensitive land uses should have limited exposure to truck routes, high traffic areas, and other ground-borne vibration producing activities. The City should also ensure that new developments minimize vibration impacts during construction.⁵⁹

⁵⁷ "City of La Quinta General Plan Update Noise Element Technical Report," prepared by Urban Crossroads, Inc., June 3, 2011.

⁵⁸ Ibid.

⁵⁹ "City of La Quinta General Plan Update Noise Element Technical Report," prepared by Urban Crossroads, Inc., June 3, 2011.

2. Project Impacts

The La Quinta General Plan Update will facilitate new development and redevelopment throughout the City of La Quinta and Sphere of Influence. Build out of the General Plan Update will generate increased noise levels associated with increased traffic, construction, and increased commercial and industrial activity. In addition, increased development near the eastern boundary of the eastern Sphere of Influence will potentially increase exposure to noise impacts associated with the Jacqueline Cochran Regional Airport. In a similar fashion, new development within the northern Sphere of Influence and the northern part of the City will also potentially increase exposure to noise impacts associated with the Bermuda Dunes Airport. Each of these impacts is discussed below.

Impacts Related to Noise Levels in Excess of General Plan or Noise Ordinance

As mentioned, the City of La Quinta currently regulates noise levels for sensitive land uses. The City uses the noise levels shown in Exhibit III-12 above, as a guideline to achieve long-term noise compatibility for land uses. For example, the maximum exterior noise level within residential areas is a CNEL of 65 dBA. Mitigation measures are required where residential uses will be exposed to noise levels greater than 65 dBA CNEL. Existing noise sources in La Quinta Planning Area are generally from motor vehicle traffic, however noise is also generated from commercial and local business operations, and construction noise.

Traffic Noise

Future noise contours have been provided along roadways throughout the Planning Area based on build out of the General Plan Update. As shown in the tables below, traffic conditions associated with the build out of the General Plan Update help determine the extent of future noise impacts associated with implementation of the General Plan Update. As mentioned, most noise in the Planning Area is associated with traffic, and level of traffic noise is based on volumes, speed, and number of trucks in traffic. The FHWA model, used to model existing noise contours, was applied to future Average Daily Traffic (ADT) volumes obtained from the City of La Quinta General Plan Circulation Element Update Traffic Impact Analysis prepared by Iteris.⁶⁰ The Traffic Study is further discussed in section III-O, Traffic/Circulation, and is presented in the appendices of this EIR.

The majority of traffic in the Planning Area is made up of automobiles. Truck and bus traffic is located along primarily along designated truck and bus routes. Future land use designations provided by the General Plan Update continue to show General Commercial land uses along Highway 111, which are considered non-sensitive land uses.

With the increased likelihood of more automobiles, trucks, and buses as a result of implementation of the General Plan Update, noise levels along roadways throughout the Planning Area will increase. Noise contours represent the distance to noise levels of a constant value and are measured from the centerline of the roadway. Table III-33 below presents the noise contours projected to result from build out of the proposed General Plan Update. It presents the

⁶⁰ Ibid.

CNEL noise contour boundaries for the 55, 60, 65 and 70 dBA noise levels, as well as a summary of the predicted noise contours and the estimated CNEL exterior noise level at a distance of 100 feet throughout the City.

As the Coachella Valley continues to grow, an increased regional emphasis on improving public transit, including increased bus service, will likely occur. New SunLine bus routes will likely be needed across the Planning Area to meet growing demands. Existing bus service is limited to the City limit currently, including along Highway 111, Washington Street, and within the Cove. New service will likely expand along roadways within the eastern Sphere. While additional bus service has potential to result in noise impacts to residential development and other sensitive receptors, these impacts are also expected to be at least partially off-set by reductions in other vehicular traffic associated with increased use of public transportation. The City of La Quinta will need to continue to monitor noise impacts associated with expanded and additional bus routes and bus stops when planned near sensitive receptors.

**Table III-33
Year 2035 Build Out Conditions Noise Contours**

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet) from centerline			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Washington St.	n/o Fred Waring Dr.	72.7	152	327	705	1,519
Washington St.	btwn Fred Waring & Miles	73.3	165	356	766	1,650
Washington St.	btwn Miles & Hwy 111	72.5	148	318	685	1,476
Washington St.	btwn Hwy 111 & Avenue 48	73.0	158	341	736	1,585
Washington St.	btwn Avenue 48 & Eisenhower Dr	72.3	142	306	658	1,418
Washington St.	btwn Eisenhower Dr & Avenue 50	71.7	129	278	599	1,290
Washington St.	btwn Avenue 50 & Calle Tampico	70.9	115	248	534	1,150
Eisenhower Dr.	btwn Washington St & Avenue 50	68.1	74	160	346	745
Eisenhower Dr.	btwn Avenue 50 & Calle Tampico	66.6	59	128	275	593
Avenida Bermudas	btwn Calle Tampico & Avenue 52	59.1	RW	RW	87	188
Avenida Bermudas	btwn Avenue 52 & Calle Durango	63.6	RW	80	173	372
Adams St.	btwn Westward Ho Dr & Hwy 111	66.6	60	129	277	597
Adams St.	btwn Hwy 111 & Avenue 48	66.8	61	132	284	613
Dune Palms Rd.	btwn Westward Ho Dr & Hwy 111	65.5	50	108	232	500
Dune Palms Rd.	btwn Hwy 111 & Avenue 48	66.7	60	129	278	598
Jefferson St.	n/o Fred Waring	70.4	107	230	496	1,068
Jefferson St.	btwn Fred Waring & Miles	71.8	132	284	613	1,320
Jefferson St.	btwn Miles & Westward Ho Dr	72.2	141	304	654	1,409
Jefferson St.	btwn Westward Ho Dr & Hwy 111	72.2	140	302	651	1,402
Jefferson St.	btwn Hwy 111 & Avenue 48	72.1	139	299	645	1,389

**Table III-33
Year 2035 Build Out Conditions Noise Contours**

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet) from centerline			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Jefferson St.	btwn Avenue 48 & Avenue 50	72.7	151	326	702	1,513
Jefferson St.	btwn Avenue 50 & Avenue 52	71.1	119	256	551	1,186
Jefferson St.	btwn Avenue 52 & Avenue 54	70.7	111	239	516	1,112
Madison St.	btwn Avenue 50 & Avenue 52	70.4	107	231	497	1,071
Madison St.	btwn Avenue 54 & Airport Blvd	72.0	136	292	629	1,355
Madison St.	btwn Airport Blvd & Avenue 58	70.8	113	244	527	1,134
Madison St.	btwn Avenue 58 & Avenue 60	68.2	76	164	354	762
Monroe St.	btwn Avenue 52 & Avenue 54	70.4	106	228	492	1,060
Monroe St.	btwn Avenue 54 & Airport Blvd	70.6	110	237	510	1,099
Jackson St.	btwn Avenue 54 & Airport Blvd	70.0	101	217	467	1,006
Jackson St.	btwn Airport Blvd & Avenue 58	70.2	103	221	476	1,026
Jackson St.	btwn Avenue 58 & Avenue 60	69.5	93	199	429	925
Jackson St.	btwn Avenue 60 & Avenue 62	68.3	77	166	358	770
Van Buren St.	btwn Avenue 52 & Avenue 54	70.0	101	217	467	1,006
Van Buren St.	btwn Avenue 54 & Airport Blvd	69.0	86	185	399	859
Van Buren St.	btwn Airport Blvd & Avenue 58	69.3	90	195	419	904
Van Buren St.	btwn Avenue 58 & Avenue 60	69.4	91	196	422	908
Van Buren St.	btwn Avenue 60 & Avenue 62	65.8	52	113	243	523
Harrison St.	btwn Airport Blvd & Avenue 58	73.7	176	378	815	1,756
Avenue 44	e/o Washington St	72.0	136	292	629	1,356
Miles Ave.	e/o Washington St	66.6	59	127	274	590
Hwy 111	e/o Washington St	75.4	230	496	1,068	2,301
Hwy 111	e/o Adams St	74.2	191	411	885	1,906
Hwy 111	e/o Dune Palms	75.2	223	481	1,036	2,233
Avenue 48	e/o Washington St	67.0	64	137	295	635
Avenue 48	w/o Jefferson St	70.0	100	215	464	999
Avenue 50	e/o Washington St	64.4	RW	91	197	424
Avenue 50	w/o Jefferson St	67.0	63	136	294	634
Avenue 50	e/o Jefferson St	69.7	96	207	447	962
Calle Tampico	btwn Eisenhower Dr & Avenida Bermudas	61.9	RW	62	134	289
Calle Tampico	btwn Avenida Bermudas & Washington St	64.7	RW	95	204	440
Avenue 52	w/o Washington St	66.7	60	130	280	603
Avenue 52	w/o Jefferson St	70.1	102	220	475	1,023
Avenue 52	e/o Jefferson St	69.7	95	206	443	955
Avenue 52	e/o Madison St	69.2	88	190	410	883
Avenue 54	e/o Jefferson St	69.9	98	212	457	984

**Table III-33
Year 2035 Build Out Conditions Noise Contours**

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet) from centerline			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Avenue 54	w/o Madison St	62.4	RW	67	145	312
Airport Blvd.	e/o Madison St	67.3	66	141	304	656
Avenue 58	w/o Monroe St	63.8	RW	83	179	386
Avenue 58	e/o Monroe St	66.0	54	117	252	542
Avenue 60	e/o Madison St	64.9	46	99	213	460
Avenue 60	e/o Monroe St	65.3	RW	105	226	488
Avenue 62	btwn Madison St & Monroe St	64.3	42	90	195	419
Avenue 62	e/o Monroe St	67.5	68	146	314	677
Avenue 62	e/o Jackson St	63.7	RW	82	178	383
Avenue 62	e/o Van Buren St	60.1	RW	47	102	220
Source: City of La Quinta General Plan Update Noise Element Technical Report," prepared by Urban Crossroads, Inc., June 3, 2011 1 "RW" = Location of the respective noise contour falls within the right-of-way of the road						

Noise standards in La Quinta allow sensitive land uses to experience a maximum noise level of 65 dbA CNEL in outdoor living areas (patios, balconies and rear yards). Many of the roadway segments provided in the above table exhibit future noise levels greater than 65 dBA CNEL beyond the established right-of-way. Sensitive land uses, including residential uses, back up to many of these roads, and may potentially experience noise levels beyond noise standards. The noise contours provided in the above table, however, are based upon soft site conditions, and do not account for noise barriers, topography, or final roadway grades that may affect ambient noise levels.

Effective noise attenuation barriers can reduce noise levels by 10 to 15 decibels. In addition, appropriate noise-compatible land use planning, such as encouraging less sensitive land uses next to highways, has been considered and included in the Land Use Map of the General Plan.

Proper mitigation measures, including the requirement to provide walls or berms, will be required to reduce noise levels to below 65 dBA CNEL near sensitive land uses. Noise studies shall be required when noise-sensitive development occurs near roads and highways. With the implementation of mitigation measures, traffic noise levels impacts in excess of local General Plan or Noise Ordinance standards on sensitive land uses will be less than significant.

Industrial and Commercial Noise

In addition to new residential development, implementation of the General Plan Update will facilitate construction of new commercial and industrial land uses throughout the Planning Area. Approximately 3,218,039 square feet of new commercial uses will be developed at build out in the City Limits. Within the Sphere of Influence, new commercial and industrial uses are also proposed at build out, including 2,458,797 square feet and 611,408 square feet, respectively. With increased commercial and industrial development, land use compatibility issues may arise when sensitive land uses are located adjacent to commercial/industrial areas. All land uses are required to comply with exterior noise levels set forth in the City's Noise Ordinance and General Plan, as discussed above, however additional mitigation measures provided below will be required to reduce impacts on sensitive uses. As a result, noise levels in excess of established noise standards generated from industrial and commercial uses are expected to be less than significant with proper mitigation.

Construction Noise

Implementation of the General Plan Update will likely increase the amount of construction related noises associated with new development, especially within the Sphere of Influence. Increased construction noise has the potential to increase noise levels in excess of noise standards set by the General Plan Update or Noise Ordinance. As shown in Table III-28, the La Quinta Municipal Code establishes base ambient noise level limits for noise sensitive and other non-residential uses based on time of day. In addition, construction activity is limited during established days and hours to reduce disruption of surrounding land uses. Future construction activity will be required to abide by these standards, and as a result, will have less than significant impacts on noise standards set by the General Plan Update and Noise Ordinance.

Impacts from Excessive Ground-borne Vibration or Ground-borne Noise Levels

As discussed above, ground-borne vibration and noise is generally associated with heavy truck and bus traffic, as well as the use of heavy equipment at construction sites. Implementation of the General Plan will facilitate development throughout the Planning Area, which will likely lead to increased truck and bus traffic, as well as increased construction activity.

The increase in volume of large trucks and buses associated with new growth may potentially cause increased vibration along designated truck and bus routes. Although the truck traffic will likely increase along these routes, future land uses along Highway 111 and other major roadways will remain General Commercial, which are not considered sensitive land uses. Any future truck routes proposed throughout the Planning Area will need to consider the amount of sensitive land uses along the proposed corridor.

Existing bus routes are currently located near sensitive land uses, such as the Cove, and new routes may develop throughout the Planning Area, including the Sphere of Influence, as a result of new growth caused by the General Plan Update. New bus routes may increase temporary vibration levels for sensitive land uses. Caltrans truck traffic vibration data, however, suggests that vibrations caused by trucks and buses diminish to below the threshold of perception at approximately 130 feet from

the road.⁶¹ Mitigation measures associated with traffic caused vibrations are set forth below. With implementation of these measures, excessive ground-borne vibration or noise generated from truck and bus traffic is expected to be less than significant.

New development throughout the Planning Area will require grading, trenching and other activities that may produce increased ground-borne vibration and noise. Construction noise is generally short term and may be mitigated to acceptable levels by a variety of measures, including equipping construction equipment with mufflers, locating stationary equipment away from noise sensitive receptors and placing equipment staging areas as far from sensitive receptors as is practicable. In addition, construction activity is required to abide by noise standards set by the General Plan Update and Noise Ordinance. Mitigation measures for construction related vibrations are set forth below. With implementation of these measures, impacts from excessive ground-borne vibration or noise generated from construction activity are expected to be less than significant.

Impacts from Permanent Increase in Ambient Noise levels Above Existing Noise Levels

Permanent increases in ambient noise levels are generally associated with increased traffic in the Planning Area. Table III-34 shows the comparison between Year 2035 CNEL contours under the 2002 General Plan at 100 feet from centerline, compared to the proposed 2035 General Plan Update conditions. The Preferred Alternative represents 2035 conditions from implementation of the General Plan Update. As shown below, the 2035 General Plan Update is expected to result in both increases and decreases to noise levels compared to the 2002 General Plan conditions, shown in the “Difference” column. Implementation of the General Plan Update will not, however, increase noise levels perceptibly anywhere in the Planning Area.

**Table III-34
Year 2035 Preferred Alternative Noise Contour Comparison**

Roadway	Segment	CNEL at 100 Feet (dBA) from centerline		
		Existing Network	Preferred Alternative	Difference¹
Washington St.	n/o Fred Waring Dr.	72.7	72.7	0.1
Washington St.	btwn Fred Waring & Miles	73.2	73.3	0.1
Washington St.	btwn Miles & Hwy 111	72.5	72.5	0.1
Washington St.	btwn Hwy 111 & Avenue 48	72.9	73.0	0.1
Washington St.	btwn Avenue 48 & Eisenhower Dr	73.0	72.3	-0.7
Washington St.	btwn Eisenhower Dr & Avenue 50	71.5	71.7	0.1
Washington St.	btwn Avenue 50 & Calle Tampico	70.8	70.9	0.2
Eisenhower Dr.	btwn Washington St & Avenue 50	68.1	68.1	0.0
Eisenhower Dr.	btwn Avenue 50 & Calle Tampico	66.7	66.6	0.1
Avenida Bermudas	btwn Calle Tampico & Avenue 52	59.2	59.1	0.1
Avenida Bermudas	btwn Avenue 52 & Calle Durango	63.7	63.6	-0.1
Adams St.	btwn Westward Ho Dr & Hwy 111	66.5	66.6	0.1
Adams St.	btwn Hwy 111 & Avenue 48	66.9	66.8	-0.1

⁶¹ “City of La Quinta General Plan Update Noise Element Technical Report”, prepared by Urban Crossroads, Inc., June 3, 2011.

Table III-34
Year 2035 Preferred Alternative Noise Contour Comparison

Roadway	Segment	CNEL at 100 Feet (dBA) from centerline		
		Existing Network	Preferred Alternative	Difference ¹
Dune Palms Rd.	btwn Westward Ho Dr & Hwy 111	65.4	65.5	0.1
Dune Palms Rd.	btwn Hwy 111 & Avenue 48	66.7	66.7	0.0
Jefferson St.	n/o Fred Waring	70.4	70.4	0.0
Jefferson St.	btwn Fred Waring & Miles	71.7	71.8	0.1
Jefferson St.	btwn Miles & Westward Ho Dr	72.2	72.2	0.0
Jefferson St.	btwn Westward Ho Dr & Hwy 111	72.2	72.2	0.0
Jefferson St.	btwn Hwy 111 & Avenue 48	72.1	72.1	0.0
Jefferson St.	btwn Avenue 48 & Avenue 50	72.6	72.7	0.1
Jefferson St.	btwn Avenue 50 & Avenue 52	71.1	71.1	0.0
Jefferson St.	btwn Avenue 52 & Avenue 54	70.6	70.7	0.1
Madison St.	btwn Avenue 50 & Avenue 52	70.5	70.4	0.1
Madison St.	btwn Avenue 54 & Airport Blvd	71.9	72.0	0.0
Madison St.	btwn Airport Blvd & Avenue 58	70.7	70.8	0.2
Madison St.	btwn Avenue 58 & Avenue 60	68.0	68.2	0.2
Monroe St.	btwn Avenue 52 & Avenue 54	70.3	70.4	0.1
Monroe St.	btwn Avenue 54 & Airport Blvd	70.5	70.6	0.1
Jackson St.	btwn Avenue 54 & Airport Blvd	70.1	70.0	0.0
Jackson St.	btwn Airport Blvd & Avenue 58	70.2	70.2	0.0
Jackson St.	btwn Avenue 58 & Avenue 60	69.3	69.5	0.2
Jackson St.	btwn Avenue 60 & Avenue 62	68.0	68.3	0.3
Van Buren St.	btwn Avenue 52 & Avenue 54	69.8	70.0	0.3
Van Buren St.	btwn Avenue 54 & Airport Blvd	69.1	69.0	-0.1
Van Buren St.	btwn Airport Blvd & Avenue 58	69.4	69.3	-0.1
Van Buren St.	btwn Avenue 58 & Avenue 60	69.5	69.4	0.1
Van Buren St.	btwn Avenue 60 & Avenue 62	66.0	65.8	0.1
Harrison St.	btwn Airport Blvd & Avenue 58	73.4	73.7	0.2
Avenue 44	e/o Washington St	71.9	72.0	0.0
Miles Ave.	e/o Washington St	66.5	66.6	0.0
Hwy 111	e/o Washington St	75.5	75.4	-0.1
Hwy 111	e/o Adams St	74.3	74.2	-0.1
Hwy 111	e/o Dune Palms	75.2	75.2	0.0
Avenue 48	e/o Washington St	67.0	67.0	0.0
Avenue 48	w/o Jefferson St	70.1	70.0	-0.1
Avenue 50	e/o Washington St	64.4	64.4	0.0
Avenue 50	w/o Jefferson St	67.2	67.0	0.1
Avenue 50	e/o Jefferson St	69.6	69.7	0.1
Calle Tampico	btwn Eisenhower Dr & Avenida Bermudas	61.9	61.9	0.0
Calle Tampico	btwn Avenida Bermudas &	64.7	64.7	0.0

Table III-34
Year 2035 Preferred Alternative Noise Contour Comparison

Roadway	Segment	CNEL at 100 Feet (dBA) from centerline		
		Existing Network	Preferred Alternative	Difference ¹
	Washington St			
Avenue 52	w/o Washington St	66.7	66.7	0.0
Avenue 52	w/o Jefferson St	70.0	70.1	0.2
Avenue 52	e/o Jefferson St	69.7	69.7	0.0
Avenue 52	e/o Madison St	69.2	69.2	0.0
Avenue 54	e/o Jefferson St	69.8	69.9	0.1
Avenue 54	w/o Madison St	62.4	62.4	0.0
Airport Blvd.	e/o Madison St	67.3	67.3	0.0
Avenue 58	w/o Monroe St	63.3	63.8	0.1
Avenue 58	e/o Monroe St	65.6	66.0	0.1
Avenue 60	e/o Madison St	63.5	64.9	1.4
Avenue 60	e/o Monroe St	65.0	65.3	0.3
Avenue 62	btwn Madison St & Monroe St	64.2	64.3	0.1
Avenue 62	e/o Monroe St	67.5	67.5	0.0
Avenue 62	e/o Jackson St	63.4	63.7	0.3
Avenue 62	e/o Van Buren St	59.9	60.1	0.3
Source: "City of La Quinta General Plan Update Noise Element Technical Report," prepared by Urban Crossroads, Inc., June 3, 2011				
1. A significant impact is considered both a level above 65 dBA CNEL and an increase greater than 3.0 dBA				

Due to the logarithmic nature of traffic noise levels, a doubling of the traffic volume would result in an increase in noise levels of 3 dBA. As discussed above, this increase is considered "barely perceptible" based on FHWA community noise assessment criteria. Therefore, increases to noise levels of less than or equal to 3 dBA are considered less than significant. As shown by Table III-34, increases in noise levels throughout the Planning Area associated with the General Plan Update are expected to be, on the average, only 0.1 dBA CNEL compared to the 2002 General Plan conditions. Because this increase is minimal (less than 3 dBA), permanent increases in ambient noise levels as a result of the General Plan Update are expected to be less than significant.

Impacts from Temporary or Periodic Increases in Ambient Noise Levels Above Existing Noise Levels

Temporary or periodic increases in ambient noise levels are generally associated with construction activity. Implementation of the General Plan Update will facilitate new residential, commercial, municipal, and industrial development throughout the Planning Area. Within the City, approximately 8,114 new residential units, 3,218,039 square feet of new commercial development, and 193.8 acres of new community facilities are expected at build out. Within the Sphere of Influence, approximately 20,699 new residential units, 2,458,797 square feet of new commercial space, and 611,408 square feet of new industrial uses are expected at build out. Development of these land uses will increase the amount of construction related noise, especially

within the Sphere of Influence. Increased construction noise has the potential to increase temporary or periodic noise levels above existing noise levels. As mentioned above, the La Quinta Municipal Code establishes base ambient noise level limits for noise sensitive and other non-residential uses based on time of day. In addition, construction activity is limited during established days and hours to reduce disruption of surrounding land uses. Future construction activity will be required to abide by these standards, and as a result, will have less than significant impacts on temporary noise levels.

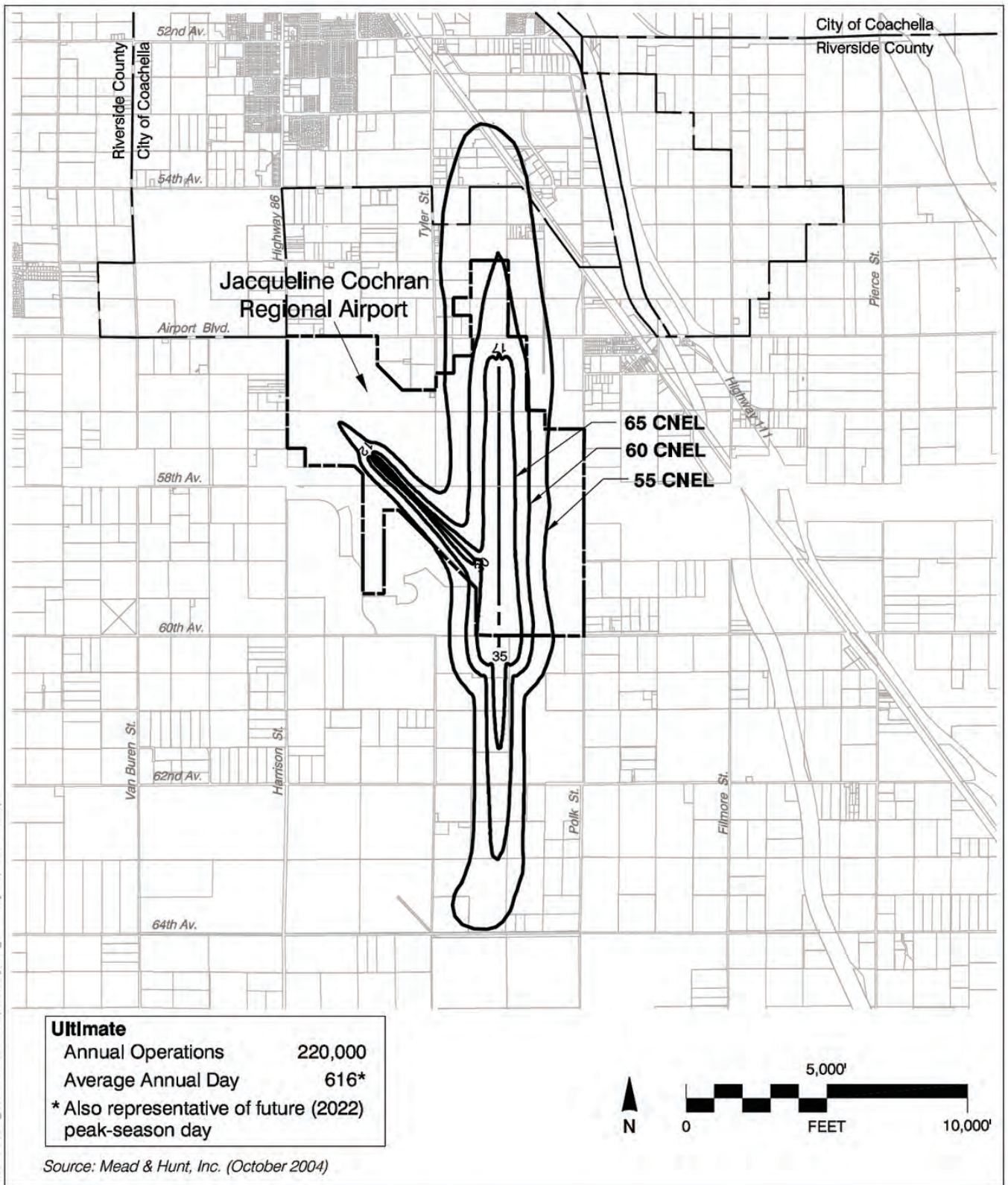
Impacts from Airport Operations

As the population of the Coachella Valley expands, existing airport facilities will also experience growth. The Jacqueline Cochran Regional Airport is expected to increase annual operations and average daily takeoffs and landings. Annual operations are expected to increase from 70,000 annual operations as of 2006,⁶² to 110,000 annual operations by 2025. Average flights per day are expected to increase from 178 to 301 over the same time period. Noise generated from the Jacqueline Cochran Regional Airport is expected to affect the eastern Sphere of Influence. The General Plan Update proposes compatible land uses nearest the airport, including industrial and general commercial land uses.

As shown on Exhibit III-16, future noise levels above 65 dBA CNEL will be contained within the boundaries of the airport. Noise impacts from future aviation operations, therefore, will have a less than significant impact on land uses proposed within the eastern Sphere of Influence.

The Bermuda Dunes Airport is a private airport located approximately 2 miles from the northern City limits and Sphere of Influence. The airport is expected to experience an increase in annual operations and average daily takeoffs and landings. Annual operations are expected to increase from 42,000 annual operations in 2004 to 75,000 annual operations by 2025. Average flights per day are also expected to increase from 115 to 205 over the same time period. Although occasional overhead flights may occur over the northern end of the City and Sphere, future noise levels above 65 dBA CNEL will be contained within the boundaries of the airport. No significant impacts are anticipated to residential development or other land uses in the vicinity.

⁶² "Airport Operation Statistics," Jacqueline Cochran Airport, <http://www.rcjra.com/AirportInformation/AirportStatistics/tabid/77/Default.aspx>, accessed July 12, 2011.



Source: Riverside County ALUCP—East County Airports Background Data (December 2004 Draft)

Sphere of Influence

The Sphere of Influence, particularly the eastern Sphere of Influence, is expected to experience a majority of the growth and development as a result of the implementation of the General Plan Update. As mentioned above, approximately 20,699 new residential units are proposed at build out in the Sphere of Influence. This will significantly increase the number of sensitive land uses in the Sphere. The Sphere of Influence is mostly undeveloped agricultural land. Noise impacts are expected to be primarily associated with temporary construction noises and gradually increasing traffic volumes as these areas develop. Site-specific design features that mitigate noise impacts may need to be implemented to limit noise impacts to acceptable levels. All noise associated with new development in the Sphere of Influence areas will be subject to the City's noise ordinance and other mitigation measures described below. Without mitigation, build out of the General Plan Update could result in significant impacts associated with noise in the Sphere.

Summary of Impacts

There are approximately 24 roadway segments in the Planning Area that currently experience noise levels greater than 65 dBA CNEL at 100 feet from the centerline under existing conditions. Future noise levels along roadways throughout the Planning Area are expected to increase with implementation of the General Plan Update. Approximately 54 roadway segments are expected to experience noise levels greater than 65 dBA CNEL at 100 feet from centerline in year 2035 at build out of the 2002 General Plan. Implementation of the General Plan Update will only cause one additional roadway segment (55 roadway segments in total) to experience noise levels greater than 65 dBA CNEL at 100 feet compared to Existing Network. The greatest increase in noise level generated by the Preferred Alternative will only cause a 1.4 dBA CNEL increase compared to the 2002 General Plan. This small increase in noise level will be barely perceptible to the human ear. Therefore, there will not be a substantial increase in future permanent noise levels as a result of the General Plan Update compared to the Existing Network.

Future increases in activity associated with commercial and industrial activity, including loading dock operations and noises associated with stationary equipment, will also likely increase permanent noise levels. These land uses, however, are required to comply with exterior noise levels set forth in the City's Noise Ordinance. Additional mitigation measures provided below, such as land use compatibility analysis, and building orientation requirements, will be required to reduce impacts on sensitive uses. As a result, noise levels in excess of established noise standards generated from industrial and commercial uses are expected to be less than significant.

The La Quinta Municipal Code establishes base ambient noise level limits for noise sensitive and other non-residential uses based on time of day. In addition, construction activity is limited during established days and hours to reduce disruption of surrounding land uses. Future construction activity will be required to abide by these standards, and as a result, will have less than significant impacts on noise standards set by the General Plan Update and Noise Ordinance.

In summary, build out of the proposed General Plan Update, including City Limit and Sphere of Influence Planning Areas, will result in overall increases to community noise levels from increased urbanization and associated activities including short-term construction noise,

increases in motor vehicle traffic and other modes of transportation. These impacts may be significant if not mitigated. Measures set forth below, however, provide broad-based mitigation and are intended to ensure the reduction of potential noise impacts to acceptable levels.

3. Mitigation Measures

The City of La Quinta has adopted exterior noise standards in Section 9.100.210 of its Municipal Code, which establishes base ambient noise level limits for noise sensitive and other non-residential zones according to time of day. Municipal Code Section 9.100.220 also provides standards for ground-borne vibrations and noises. In addition Section 6.08.050 provides limited hours for construction to alleviate construction noise. The City's exterior noise standards for various land uses are consistent with those set forth by the State of California in its "Land Use Compatibility for Community Environments" matrix.

The mitigation measures that follow shall be implemented within the General Plan area to ensure the reduction of potential noise impacts to less than significant levels. Additional site-specific noise mitigation measures may also be required as appropriate for future development.

General Mitigation Measures

1. The City shall continue to maintain and enforce noise standards provided by the Municipal Code to ensure that noise impacts throughout the General Plan area are maintained at acceptable levels.
2. The City shall continue to ensure that interior noise levels for residential development do not exceed 45 dBA by requiring that all project designs comply with Title 25 (California Noise Insulation Standards).
3. Acoustical studies shall be required in conjunction with entitlement applications for sensitive receptor projects proposed adjacent to roadways shown in Table III-34. The study shall analyze noise levels within the proposed project, and include mitigation measures to assure that the exterior noise levels meet the City's standards.
4. The City shall require an acoustical studies for all commercial and industrial projects that are proposed adjacent to residential land uses or land use designations. The acoustical analysis shall evaluate potential noise impacts of the project and provide mitigation measures that are adequate to meet the City's noise standards for residential land uses.
5. Sensitive receptors, which include schools, libraries and hospitals, shall, to the greatest extent feasible, be located away from major noise generators.

Roadway Traffic Noise

6. The City shall continue to implement a planning area-wide circulation pattern that loads primary traffic onto major arterials in order to limit local roadway traffic to the greatest extent feasible and thereby preserve local neighborhood noise environments.

7. The City shall evaluate and monitor noise impacts associated with the addition of new bus routes, including bus stops near noise sensitive uses, located along collector and local roads.
8. The City shall evaluate and monitor noise impacts associated with new truck routes proposed throughout the Planning Area, and discourage new truck routes along roadway segments near sensitive land uses.

Construction Noise

9. All fixed and mobile construction equipment operating in the Planning Area shall be equipped with properly operating and well-maintained mufflers to limit noise emissions. Stationary construction equipment shall be placed away from sensitive noise receptors.
10. New construction site staging areas, stockpiling, earth moving activities, and hauling routes should be situated away from sensitive noise land uses to the greatest extent possible.
11. All construction activities shall comply with the City of La Quinta Municipal Code Section 6.08.050.
12. Ground-borne vibration activities shall be conducted in compliance with the City of La Quinta Municipal Code Section 9.100.220.

Stationary Noise Sources

13. Appropriate sound barriers shall surround all commercial, industrial and public facilities located adjacent to sensitive land uses.
14. Outdoor equipment such as cooling towers, air cooled condensers and refrigeration compressors and/or condenser units, as well as at air intake and discharge openings for building ventilation systems, shall be provided with silencers and/or barriers at or surrounding them, where necessary.
15. Truck deliveries to commercial and industrial areas adjacent to sensitive land uses shall be limited to daylight hours, or shall provide noise mitigation measures to reduce noise impacts.

Mitigation Monitoring/Reporting Program

- A. The City shall periodically review land-use patterns and the community noise environment, and amend the Land Use map as appropriate to ensure reasonable land use/noise compatibility.

Responsible Parties: Planning Department

- B. The Planning Department shall review acoustical analyses for new sensitive receptor projects located adjacent to major roadways, and commercial and industrial project located to sensitive receptors.

Responsible Party: Planning Department

- C. The City shall work with SunLine Transit Agency to locate future bus stops and routes to ensure noise impacts to sensitive receptors are minimized.

Responsible Party: Planning Department, SunLine Transit Agency.

L. Population and Housing

Introduction

This section of the EIR addresses potential impacts and opportunities associated with population and housing that may exist or arise from implementation of the La Quinta General Plan Update. The existing population and housing conditions, forecast growth and housing projections within the City and Sphere of Influence are described, and the potential impacts relating to changes from the previously approved General Plan, are assessed.

Thresholds of Significance/Criteria for Determining Significance

The following thresholds or criteria are derived from Appendix G of the CEQA Guidelines, and are used to determine the level of potential effect. The significance determination is based on the recommended criteria set forth in Section 15064 of the CEQA Guidelines. For analysis purposes, build out of the La Quinta General Plan would have a significant effect on population and housing if it is determined that the project will:

- a.) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

1. Existing Conditions

The General Plan Update Planning Area consists of the incorporated City limits and the unincorporated Sphere of Influence. Residential development within City limits is 73% built out, whereas residential development within the Sphere of Influence is 7.5 % built out.

Demographic Information

Population

In 2000, there were 23,694 people living in La Quinta. The 2010 U.S. Census reports a population size of 37,467 for the City of La Quinta. In 2000, the median age was 36.4 years, while in 2010 the median age was 46.6. According to the 2010 U.S. Census, the population of La Quinta is 63.1% White, 30.3% Hispanics, 3.1% Asian, 1.9% Black or African American, and 1.6% other. Approximately 36.3% of the population within the City of La Quinta is above 55 years of age.⁶³

Currently, there are approximately 23,489 dwelling units within the City, 14,820 of which are occupied. Assuming an average household population size of 2.53 and full occupancy of all

⁶³ Profile of General Population and Housing Characteristics, for the City of La Quinta, 2010 US Census.

existing dwelling units, the existing population in La Quinta's City limits is estimated to be 59,427.

In the Sphere of Influence, under Riverside County's land use designations, there are approximately 7,173 acres of residentially designated lands, of which 538 acres are currently developed. According to Riverside County, the developed acreage contains an estimated 801 existing low density residential dwelling units. Based on the persons per household figure of 2.53, the existing population within the Sphere of Influence is estimated to be 2,027.

In total, the General Plan Update Planning Area is estimated to contain an existing population of 61,454.

Housing Units

In 2000, there were 11,812 housing units within the City of La Quinta, and by 2005, there were 18,762 dwelling units. The 2010 Census accounted for a total of 23,489 dwelling units, the majority of which are single family detached units -- approximately 80% of the housing stock is single family detached, 10% is single family attached, 9% is multi-family, and 1% is mobile homes.⁶⁴ Nearly 37% of all housing units are unoccupied. The 2010 population of 37,467 and the 14,820 occupied dwelling units yields an average household population size of 2.53 persons per household.

It should be noted many of La Quinta homeowners are second homeowners and are considered part-time residents. According to the 2010 U.S. Census, approximately 27.5% of La Quinta dwelling units were vacant due to seasonal, recreational, or occasional use.

In the second quarter of 2011 the median home price for existing homes in La Quinta was \$232,000 and the median new home price was \$360,000.⁶⁵ At current levels, home ownership is considered affordable to moderate income households. Home prices exceed those of Riverside County for the same period, which were \$189,000 for existing homes and \$290,000 for new homes.

Employment

In 2007, there were 14,918 jobs within the City. Based on the 2009 Riverside County progress report, La Quinta's civilian labor force was comprised of 14,700 persons, with 13,700 employed and 1,100 unemployed. The majority of jobs within City limits are in the resort, service, and hospitality industry, followed by retail trade, professional and business services, and construction. The median household income in La Quinta in 2000 was \$54,552, and had risen to \$78,898 by 2010.

2. Project Impacts

There are 23,489 dwelling units within City limits, and 801 units within the Sphere of Influence, for a total of 24,290 existing dwelling units throughout the Planning Area. The General Plan

⁶⁴ Average Housing Characteristics for 2005-2009, prepared by the American Community Survey.

⁶⁵ "Inland Empire Quarterly Economic Report," prepared by John E. Husing, Ph.D., October 2011.

Update allows for a total of up to 31,603 residential dwelling units within City limits and 21,500 dwelling units within the Sphere of Influence, which has the potential to result in a total of 53,103 dwelling units throughout the Planning Area. Development of these residential units could support an additional 72,897 residents beyond the existing population of 61,454, which would result in a build out population of 134,352 in the General Plan Update Planning Area. It should be noted that these figures assume an average household population size of 2.53 people and full occupancy of seasonal, recreational, and occasional occupancy dwelling units, as well as permanent residency.

La Quinta City Limits

Within the La Quinta City limits, build out of the proposed General Plan Update has the potential to result in the development of an additional 8,114 dwelling units, which could support an additional 20,528 people, assuming an average household occupancy of 2.53. At General Plan build out, the population size within city limits is projected to be 79,956, based on full occupancy of the 31,603 dwelling units that are proposed under the General Plan Update. This represents a 34% increase over the existing number of dwelling units and the associated population size.

According to the Southern California Association of Government's (SCAG) May 2011 growth forecasts, it is projected that by 2035 La Quinta's permanent population will be 46,297 people, and there will be 17,948 occupied dwelling units within the City of La Quinta. SCAG projections assume an annual growth rate of approximately 0.85%. These projections do not account for seasonal, recreational, and occasional occupancy. As such, to determine consistency with the SCAG forecasts, projections set forth in the La Quinta General Plan are discounted by 27.5%. Discounting the proposed General Plan projections by 27.5% yields an estimated 22,912 dwelling units and an associated population of 57,969 in 2035, which assumes an annual growth rate of 1.38%. Projections set forth in the La Quinta General Plan are approximately 20% greater than the SCAG forecast in 2035. This difference is expected given the variation in growth rates, and the conservative assumptions of the EIR analysis including full occupancy of seasonal units and a build out year of 2035.

Assuming that the proposed General Plan Update builds out by 2035, the population would have increased by 34% compared to the 2010 population. As such, the General Plan Update has the potential to induce population growth. Given that this rate of growth is estimated to be 1.38% per year, the proposed General Plan is not expected to be substantially growth inducing.

When considering the entire Planning Area, the build out population under the General Plan Update is reduced compared to the 2002 General Plan (See Planning Area discussion below). Therefore, although the proposed General Plan has the potential to increase the population and housing development within city limits, it is not expected to result in significant growth inducing impacts.

The General Plan Update would allow for the development of an additional 3,218,039 square feet of commercial development within City limits. While it is difficult to estimate the exact number of jobs that may be created as a result of this development, the Riverside County Center

for Demographic Research projects that, by 2035, there will be a total of 21,678 jobs within La Quinta City limits. The 2002 General Plan allowed for up to 7,899,431 square feet of commercial development within city limits at built out. The level of commercial development proposed under the General Plan Update is a reduction from the commercial development proposed under the 2002 General Plan. Therefore, the General Plan Update will not induce growth as a result of commercial or business development and impacts are considered to be less than significant.

Employment Projections

According to the SCAG Integrated Growth Forecast, it is projected that in 2020 there will be 10,565 La Quinta residents that are employed, and by 2035, there will be 11,864 La Quinta residents who are employed. The City of La Quinta is projected to contain 21,678 jobs by 2035. As such, over half of the jobs offered in La Quinta City limits could be filled by La Quinta residents.

Sphere of Influence

In the Sphere of Influence, under the County's land use designation, there are approximately 7,175 acres of residentially designated lands. If the Sphere were to build out under the current County land use designations, a total of 11,946 residential units would be developed. Based on the persons per household rate of 2.53, the population within the Sphere of Influence would be 30,222.

For purposes of analysis, this document assumes build out of the Sphere under the designations assigned to these lands on the Land Use Map. However, the General Plan Update requires the completion of a master plan for the eastern Sphere, which could significantly change the number of units that are developed in this area. The General Plan Update allows for the development of up to 21,500 residential dwelling units, which would result in a built out population size of 54,396 within the Sphere of Influence. As proposed, implementation of the General Plan Update would increase the population within the Sphere of Influence by 24,174 people or 80% over the current County land use designations. Therefore, the General Plan Update has the potential to induce growth and result in a substantial increase to the population size. The proposed development for residential land uses in the Sphere of Influence has the potential to result in significant impacts to population and housing. The development of the master plan for the area will change the land use distribution in this area, and provide greater specificity regarding building density and intensity. The master plan, therefore, will mitigate potential impacts associated with population and induced growth.

In addition, the General Plan Update would allow for the development of up to 2,732,557 square feet of commercial development and 611,408 square feet of industrial uses within the City's Sphere of Influence. Under the General Plan Update, all land outside of the incorporated city limits are contained within the Sphere of Influence, and said area, including proposed square footage, has been reduced compared to the 2002 General Plan.

Under the County's Vista Santa Rosa Land Use Concept Plan, a total of 5,161,764 square feet of retail is proposed. The proposed General Plan Update would result in less commercial development relative to the 2002 General Plan and the County's Plan. Therefore, commercial

development set forth in the General Plan Update is not expected to be growth inducing, and impacts will be less than significant.

Planning Area Summary

The overall Planning Area for the La Quinta General Plan Update has the potential to result in the development of 53,103 residential units, which could support a population of 134,352 people. As described above, implementation of the General Plan Update is not expected to substantially induce growth within City limits. However, the proposed development within the Sphere of influence has the potential to increase the population by 80% compared with that permitted under current County land use designations. Thus, the proposed General Plan Update has the potential to result in significant impacts to population and housing from growth inducing development within the Sphere of Influence. In order to mitigate potential impacts from proposed development within the Sphere of Influence, a Master Plan of Development will be prepared. Adherence to such a plan would be sufficient to reduce potential impacts to population and housing within the Sphere of Influence to levels below significance.

3. Mitigation Measures

1. A Master Plan of Development shall be prepared for the Vista Santa Rosa area. Development within this area shall be subject to policies set forth in the said Master Plan.

Monitoring and Reporting

- A. New development proposed for the Sphere of Influence will be reviewed for consistency with the Master Plan of Development.

Responsible Parties: Planning Department

M. Public Services & Utilities

Introduction

Current public services, utilities and service systems in the General Plan Planning Area and the vicinity are described in this section. It also analyzes potential constraints, risks and opportunities associated with these existing conditions. Potential impacts associated with implementation of the proposed General Plan Update are also considered, and mitigation measures set forth to reduce impacts.

In order to research and assess these impacts, a variety of resources have been consulted, including personal communication with service providers and other sources. Please also see Existing Conditions, below, for further discussion of these resources.

Thresholds of Significance/Criteria For Determining Significance

The following standards and criteria have been drawn from Appendix G Environmental Checklist Form of the CEQA Guidelines to assess the significance of potential impacts to public services and facilities that may result from the adoption and implementation development of the La Quinta General Plan. Impacts would be considered significant if implementation of the General Plan would result in the following:

- a.) Conflict with or obstruct construction of new public utilities or facilities, including above-ground and subsurface energy, fuel or telecommunication transmission facilities.
- b.) Conflict with or obstruct the operation and maintenance of existing public utilities or facilities, including aboveground and subsurface energy, fuel or telecommunication transmission facilities.
- c.) Result in substantial adverse physical impacts associated with or create substantial impediments to the provision of new or physically altered government facilities.
- d.) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- e.) Require or result in the construction of new or wastewater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- f.) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- g.) Not have sufficient water supplies available to serve the project from existing entitlements and resources, or new expanded entitlements are needed.

- h.) Have inadequate landfill capacity to accommodate the project's solid waste disposal needs.
- i.) Fail to meet the water supply assessment requirements of Water Code Section 10910, et seq. (SB 610), and the requirements of Government Code Section 664737 (SB 221).
- j.) Fail to result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- k.) Not be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- l.) Fail to comply with federal, state, and local statutes and regulations related to solid waste.
- m.) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or create a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for fire protection, police protection, schools, parks, and other public facilities.

Service Providers

There are a wide range of public services and facilities serving the General Plan Update area. These include:

- Public Schools: Desert Sands Unified School District, Coachella Valley Unified School District
- Library Services: Riverside County Library System
- Law Enforcement: La Quinta Police Department/Riverside County Sheriff's Department
- Fire Protection: La Quinta Fire Department
- Electricity: Imperial Irrigation District
- Natural Gas: The Gas Company
- Domestic Water: Coachella Valley Water District
- Wastewater Collection/Treatment: Coachella Valley Water District
- Solid Waste Management: Burrtec Waste and Recycling Services, LLC

Schools

1. Existing Conditions

Public Schools

There are two school districts providing public education to students in Kindergarten through 12th Grade in La Quinta: Desert Sands Unified School District (DSUSD) and Coachella Valley Unified School District (CVUSD). Each is described below.

Desert Sands Unified School District

DSUSD services students to students living west of Jefferson Street and north of Avenue 48. This includes the northern Sphere of Influence. District administrative offices and the bus yard are located on Dune Palms Road in La Quinta.

There are seven DSUSD schools in La Quinta. The following table lists each school as well as enrollment and design capacity.

Table III-35
Desert Sands Unified School District Enrollment and Capacity

School	Location	2010 Enrollment¹	Capacity²
John Adams Elementary School	50-800 Desert Club Drive	432	750
Benjamin Franklin Elementary School	77-800 Calle Tampico	631	750
Harry S. Truman Elementary School	78-870 Avenue 50	614	750
La Quinta Middle School	78-900 Avenue 50	662	1,200
Colonel Mitchell Paige Middle School	43-495 Palm Royale Drive	993	1,200
La Quinta High School	79-255 Westward Ho Drive	2,948	2,200
Summit Continuation School (K-12)	43-330 Palm Royale Drive	475	N/A

¹ Enrollment as of November, 2010. Source: Personal communication, Linda Lawson, DSUSD Fiscal Department, December 16, 2010.

² Represents design capacity; school facility capacities expand to meet enrollment using portable classrooms. Source: Personal Communication, James Kozero, DSUSD Facilities Department, December 16, 2010.

As noted above, current enrollment at the La Quinta High School exceeds design capacity. The District utilizes portable classrooms to accommodate over-capacity student enrollment at its schools until enrollment warrants construction of new school facilities. DSUSD recently opened the Shadow Hills High School north of US I-10 near Jefferson Street, which it expects will gradually absorb some of the excess student population currently served by La Quinta High School. Shadow Hills has a current enrollment of between 900 and 1,000 students.

In general, DSUSD student populations have remained stable or declined slightly as a result of recession-related impacts on local development. Facilities staff has indicated it expects that no new school facilities will be required in the short term (2 to 4 years). However, the District continues to plan for expansion. Although there are few if any sites available for new DSUSD school facilities within La Quinta, DSUSD has identified future school site properties near the Shadow Hills campus and in the cities of Indio and Coachella.⁶⁶

⁶⁶ Personal communication, James Kozero, Project Manager, DSUSD Facilities Department, December 16, 2010.

Coachella Valley Unified School District

The CVUSD district boundaries within La Quinta include lands east of Jefferson Street and East of Avenue 48. This includes the City's eastern Sphere of Influence. There are four CVUSD schools serving students in La Quinta and the eastern Sphere. These are shown in Table III-36.

Table III-36
Coachella Valley Unified School District Enrollment and Capacity

School	Location	2010 Enrollment¹	Capacity
Westside Elementary School	82-225 Airport Boulevard (Sphere)	636	678
Cahuilla Desert Academy	82-489 Avenue 52 (Sphere)	721	990
Mountain Vista Elementary School	49-750 Hjorth Street (NE of Sphere)	991	750
Coachella Valley High School	83-800 Airport Boulevard (City limits)	2,551	1,712

¹ Enrollment as of December, 2010.

Source: Personal communication, Marcella Valdez, CVUSD Facilities Department, December 16, 2010.

The over-capacity student population at Mountain Vista Elementary School is currently housed in portable classrooms. The District has no plans for a new elementary school; however, a new school to serve students grades 7 through 12 is planned near Avenue 49 and Monroe Street, east of the City. No construction start date has been specified.⁶⁷

Other Public School Facilities

DSUSD also provides adult education programs, such as GED test preparation, citizenship classes and English as a Second Language. It also offers early childhood education, special education services, and after-school programs. The Alternative school provides independent learning and home schooling support for students in grades Kindergarten through 12th grade.

Other CVUSD services include an adult school with vocational training, citizenship classes, and GED test preparation. CVUSD also offers tutoring and special education services.

School Funding

There are a variety of funding sources for these school districts, including a portion of local property taxes as well as State funds. In addition, State Assembly Bill 2926 (AB 2926), enacted in 1986) authorizes school districts to levy an impact fee on developers. These fees may be used to construct new facilities. They are updated periodically. Fees are \$2.97 per square foot of new residential development and \$0.47 per square foot of commercial/industrial development.⁶⁸

⁶⁷ Personal communication, Marcella Valdez, CVUSD Facilities Department, December 16, 2010.

⁶⁸ "Facilities: Demographics," <http://www.coachella.k12.ca.us/interport/default.aspx?tabid=59>, accessed November 23, 2010.

Higher Education Institutions

There are three regional higher education institutions in the eastern Valley. They include the College of the Desert, a community college with Associates degree programs and adult education. Bachelor's and Master's degree programs are offered through California State University, San Bernardino and University of California, Riverside. All three campuses are located in Palm Desert, approximately 8 miles northwest of the City.

2. Impacts

The following tables show estimated student enrollment in the City limits and Sphere of Influence. These estimates include existing and future units based on General Plan build out.

**Table III-37
Potential Student Generation La Quinta City Limits**

Grade Level	Max. Build out Units	Student Generation Rate	Projected Enrollment
Elementary (K-6)			
Single Family	25,585	0.214	5,475
Multi-Family	6,017	0.1267	762
Elementary Subtotal			6,237
Middle (7-8)			
Single Family	25,585	0.1093	2,796
Multi- Family	6,017	0.0522	314
Middle School Subtotal			3,110
High School (9-12)			
Single Family	25,585	0.1427	3,651
Multi-Family	6,017	0.0543	327
High School Subtotal			3,978
Total	31,603		13,325
Terra Nova Staff Estimates based on Student Generation Rates, Desert Sands Unified School District Master Facilities Plan, October 2008.			

Table III-38
Potential Student Generation Sphere of Influence

Grade Level	Max. Build out Units	Student Generation Rate	Projected Enrollment
Elementary (K-6)			
Single Family	21,281	0.214	4,554
Multi-Family	219	0.1267	28
Elementary Subtotal			4,582
Middle (7-8)			
Single Family	21,281	0.1093	2,326
Multi- Family	219	0.0522	11
Middle School Subtotal			2,337
High School (9-12)			
Single Family	21,281	0.1427	3,037
Multi-Family	219	0.0543	12
High School Subtotal			3,049
Total	21,500		9,968
Terra Nova Staff Estimates based on Student Generation Rates, Desert Sands Unified School District Master Facilities Plan, October 2008.			

Table III-39
Potential Student Generation Planning Area Summary

Grade Level	Max. Build out Units	Student Generation Rate	Projected Enrollment
Elementary (K-6)			
Single Family	46,866	0.214	10,029
Multi-Family	6,236	0.1267	790
Elementary Subtotal			10,819
Middle (7-8)			
Single Family	46,866	0.1093	5,122
Multi- Family	6,236	0.0522	325
Middle School Subtotal			5,447
High School (9-12)			
Single Family	46,866	0.1427	6,688
Multi-Family	6,236	0.0543	339
High School Subtotal			7,027
Total	53,103		23,293
Terra Nova Staff Estimates based on Student Generation Rates, Desert Sands Unified School District Master Facilities Plan, October 2008.			

New development in the planning area will occur over time, and student populations are also expected to increase gradually. Both school districts employ facilities planning that provides for new school sites as population within their respective boundaries increases. CVUSD and DSUSD will continue to receive developer's impact fees for residential, commercial and industrial development. These measures are expected to minimize impacts to CVUSD and DSUSD schools. However, schools in both districts are currently operating at or beyond capacity, and new facilities will be needed to serve the build out student population in the Planning Area. Mitigation measures are set forth below to ensure that any potential adverse effects to public schools are reduced to less than significant levels.

At this level of analysis, there is not sufficient site-specific development data to calculate developer impact fees; further these fees are periodically adjusted. It is to be expected, however, that these fees will be substantial and will assist the school districts in the General Plan Area to offset impacts of new development on their respective schools.

3. Mitigation Measures

The following mitigation measures shall be implemented to ensure that impacts are reduced to less than significant levels for schools in the Coachella Valley Unified School District and Desert Sands Unified School District.

1. Developers shall continue to be assessed statutory school mitigation fees for residential and commercial development.

Mitigation Monitoring and Reporting

- A. The City shall continue to coordinate with the Coachella Valley Unified School District and Desert Sands Unified School District to assure that statutory developer impact fees are collected.

Responsible Party: Planning Department

Libraries

1. Existing Conditions

The La Quinta Library is located at 78-275 Calle Tampico. The City owns the library facility, which is operated by Riverside County. Currently, the Library contains 89,060 volumes within a 20,000 square foot space. Although the City has not established a standard for library facilities, the County Library system aims for an un-adopted standard of two volumes per capita. Based on this standard, existing library facilities are sufficient to serve the current population.

2. Impacts

Based on the County Library System's target standard, the estimated build out population of 79,956 in the City limits will require 159,912 volumes at build out of the General Plan. The Sphere build out population of 54,396 will require 108,792 volumes. In total, the Planning Area will require 268,704 volumes at build out. Additional facilities would also likely be required to house the additional volumes and serve patrons.

The City assesses Developer Impact Fees (DIF) on residential development for library services and facilities. Currently, fees are assessed at \$355 for single-family detached units, \$266 for single-family attached units, and \$348 for multi-family units.⁶⁹ These are one-time fees assessed when new units are constructed. Based on these fees, new residential development in the City limits could generate up to approximately \$2.86 million in library fees; up to an additional \$7.35 million could be generated in the Sphere. In total, new residential development in the planning area is expected to generate approximately \$10.21 million in library development fees. Fees will be assessed as new development occurs, so these revenues will not be available to the City all at one time. The City's DIF schedule would be expected to increase over the course of General Plan build out. These fees have been developed based on a rational nexus, and will therefore be sufficient to accommodate growth through General Plan build out, reducing impacts to less than significant levels.

The City has studied the land use pattern in the Sphere, and has considered several potential annexation proposals in the past. These proposals included analyses relating to the availability and cost of the provision of services in the Sphere. These analyses found that in the eastern Sphere in particular, lands have been encumbered by the County as collateral for a regional bond issue. As a result, there will be no property tax generation to the City from these lands for a number of years. The fiscal analysis concluded that the annexation of property in the Sphere would have a negative fiscal impact on the City. At the time of the analysis, a per unit mitigation fee was considered, but the proposed annexations did not proceed, and the mitigation program was not implemented. The costs associated with annexation to the City, however, still exists, and will remain an issue as annexation proposals occur in the future.

As described above, the annexation of lands in the eastern Sphere would have a negative fiscal impact on the City, including the library. Although past annexation requests were not completed, conditions have not changed since this analysis was undertaken, and it would be expected that annexation proposals in the future would have a similarly negative fiscal impact. The General Plan includes policies that require both the preparation of fiscal impact analyses for annexation proposals, and a Development Agreement in association with annexation. The Development Agreement would establish the parameters for development, and would include mitigation fee payments for projects that are fiscally negative for the City. These Development Agreements would eliminate the potential fiscal impacts to the City in providing library services to newly annexed lands.

The implementation of these policies would reduce impacts to less than significant levels.

⁶⁹ "City of La Quinta Development Impact Fee Summary," December 8, 2008.

3. Mitigation

None required.

Mitigation Monitoring and Reporting

None required.

Law Enforcement

1. Existing Conditions

The City contracts annually with the County of Riverside for police staffing. In 2010-2011, the City's contract provided for the equivalent of 51 sworn officers and 5 community service officers. City-assigned officers conduct investigations, manage traffic control, and provide general patrol duties. Patrol division staff is augmented by a Special Enforcement Team, which provides investigative services and support for prevention activities in the community. Community programs include the School Resource Officer program at local schools; the Junior Cadet program; a Crime Stoppers program; the volunteer Citizens on Patrol Program; and Community Service Officers. The latter, which are assigned to each division, serve as community liaisons and are responsible for coordinating Community Programs such as Neighborhood Watch.

There are two Police Department offices in the City: a station at 51-351 Avenida Bermudas, and a Business District Office located at 79-440 Corporate Center Drive.

The Riverside County Sheriff's Department maintains a staffing level of one staff per 1,000 population.⁷⁰ The City has no established staffing ratio, and police staffing in La Quinta is based on the safety needs of the local community and the available resources to provide these safety needs.⁷¹ Based on the City's 2010 full occupancy population of 59,427, the current level of police staffing is approximately 1.06 staff per 1,000 population.

⁷⁰ Written communication, Lt. Jason Huskey, Assistant Police Chief, La Quinta Police Department, Riverside County Sheriff's Department, December 2, 2010.

⁷¹ Written communication, Bret Plumlee, Assistant City Manager, City of La Quinta, December 6, 2010.

2. Impacts

At build out, the City and Sphere of Influence are expected to have a total population of 134,352. Based on the Riverside County staffing ratio, the police department will require 134 sworn officers at build out. This is an increase of 78 sworn officers as compared with current staffing levels, which represents a substantial additional demand for police protection and associated equipment and patrol vehicles. Increases in cost to the City could be significant. Demand will increase gradually, and revenues to the City are also expected to occur as the General Plan builds out. Demand for police protection will depend on actual development in the future.

The City has studied the land use pattern in the Sphere, and has considered several potential annexation proposals in the past. These proposals included analyses relating to the availability and cost of the provision of services in the Sphere. These analyses found that in the eastern Sphere in particular, lands have been encumbered by the County as collateral for a regional bond issue. As a result, there will be no property tax generation to the City from these lands for a number of years. The fiscal analysis concluded that the annexation of property in the Sphere would have a negative fiscal impact on the City. At the time of the analysis, a per unit mitigation fee was considered, but the proposed annexations did not proceed, and the mitigation program was not implemented. The costs associated with annexation to the City, however, still exists, and will remain an issue as annexation proposals occur in the future.

As described above, the annexation of lands in the eastern Sphere would have a negative fiscal impact on the City, including police services. Although past annexation requests were not completed, conditions have not changed since this analysis was undertaken, and it would be expected that annexation proposals in the future would have a similarly negative fiscal impact. The General Plan includes policies that require both the preparation of fiscal impact analyses for annexation proposals, and a Development Agreement in association with annexation. The Development Agreement would establish the parameters for development, and would include mitigation fee payments for projects that are fiscally negative for the City. These Development Agreements would eliminate the potential fiscal impacts to the City in providing police services to newly annexed lands.

The implementation of these policies would help to reduce impacts.

3. Mitigation

1. All new development projects shall be subject to Police Department review to assure that the Department can provide adequate police protection.
2. The City shall monitor City population and Police Department staffing levels to ensure the provision of police protection services at sufficient levels.

Mitigation Monitoring and Reporting

- A. On an annual basis, the City shall evaluate response times and police activity to assure adequate protection.

Responsible Parties: City Manager, Police Department.

Fire Protection

1. Existing Conditions

Fire protection is provided through a contract with the Riverside County Fire Department, which also serves the Sphere of Influence areas. There are three City-owned fire stations, each staffed with full-time paid and volunteer firefighters, and equipped as listed below:

Fire Station No. 32 at 78-111 Avenue 52; equipment includes a primary and reserve fire engines, and volunteer squad and rescue vehicles.

Fire Station No. 70 at 54001 Madison Street; equipped with a primary engine, a brush fire engine, and a volunteer squad vehicle.

Fire Station No. 93 at 44-555 Adams Street; equipped with a primary engine and a reserve engine.

Emergency response in the Planning Area is also available through Riverside County Fire Department stations in other cities. These include Station No. 55, located in Indian Wells; Station No. 88, in Indio; and Station No. 39, located at the Desert Resorts Airport, east of the City's eastern Sphere of Influence. County Fire dispatches all calls through its centralized Emergency Command Center, where responding stations are determined based on location and need.

Average Fire Department response times are between 5 and 7 minutes. La Quinta has an Insurance Service Office (ISO) of 4, based on a scale of 1 through 10, with 1 being the highest rating. Ratings are reviewed periodically. A variety of criteria are used to determine the ISO rating, such as staffing levels, response times, safety history and building code standards.

The County Fire Department cites thresholds established in its 1986 Master Plan,⁷² which call for one new fire station per every 2,000 dwelling units or 3.5 million square feet of commercial development.⁷³ The Fire Department has developed a Strategic Plan to update thresholds and plan for staffing, facilities and services through 2029. Goals and strategies include developing a "standard of cover" analysis to establish appropriate staffing levels to meet operational needs within the various jurisdictions the Department serves.⁷⁴

⁷² "Riverside County Fire Protection and Emergency Medical Master Plan", January 2, 1986.

⁷³ Personal communication, Jason Newman, Riverside County Fire Department Strategic Planning, December 22, 2010.

⁷⁴ "Riverside County Fire Department Strategic Plan 2009-2029", prepared by Management Partners, Inc., November 2009.

2. Impacts

Implementation of the General Plan Update and the increase in population in the General Plan Planning Area is expected to result in an increase in demand for fire protection services. The need for additional services will be determined as the Planning Area develops; additional staff, equipment and vehicles, and fire stations will be needed. The extension of water mains and installation of new fire hydrants may also be required which are currently undeveloped or less developed. The potential cost to the City may be substantial, and on-going monitoring and evaluation of the need for additional facilities and staff will be necessary throughout build out.

The County Fire Department evaluates specific development proposals based on their potential to demand additional fire department facilities and staffing. It considers existing conditions in the area as well as future needs of such new development in determining whether it is appropriate to require new fire facilities based on the standards set forth in the 1986 Master Plan, as cited above.⁷⁵ It is expected that as the General Plan Area builds out, new “standards of cover” developed in association with the Department’s Strategic Plan will be applied to new development. Future development will continue to be subject to Fire Department review and new fire facilities will be constructed as needed to ensure adequate provision of fire protection services in the Planning Area.

The City has studied the land use pattern in the Sphere, and has considered several potential annexation proposals in the past. These proposals included analyses relating to the availability and cost of the provision of services in the Sphere. These analyses found that in the eastern Sphere in particular, lands have been encumbered by the County as collateral for a regional bond issue. As a result, there will be no property tax generation to the City from these lands for a number of years. The fiscal analysis concluded that the annexation of property in the Sphere would have a negative fiscal impact on the City. At the time of the analysis, a per unit mitigation fee was considered, but the proposed annexations did not proceed, and the mitigation program was not implemented. The costs associated with annexation to the City, however, still exists, and will remain an issue as annexation proposals occur in the future.

As described above, the annexation of lands in the eastern Sphere would have a negative fiscal impact on the City, including fire protection services. Although past annexation requests were not completed, conditions have not changed since this analysis was undertaken, and it would be expected that annexation proposals in the future would have a similarly negative fiscal impact. The General Plan includes policies that require both the preparation of fiscal impact analyses for annexation proposals, and a Development Agreement in association with annexation. The Development Agreement would establish the parameters for development, and would include mitigation fee payments for projects that are fiscally negative for the City. These Development Agreements would eliminate the potential fiscal impacts to the City in providing fire protection services to newly annexed lands.

⁷⁵ Personal communication, Jason Newman, Riverside County Fire Department Strategic Planning, December 22, 2010.

The implementation of these policies would help to reduce impacts.

3. Mitigation

Impacts associated with provision of fire protection services will be reduced to less than significant levels with the implementation of the following mitigation measures:

1. The City and Riverside County Fire Department shall continue to confer and coordinate to ensure that facilities and services are expanded in a timely manner.
2. The City shall plan for siting of industrial facilities that store hazardous, flammable or explosive materials so as to assure the highest level of safety in strict conformance with Uniform Fire Code and other applicable codes and regulations.
3. The Riverside County Fire Department shall continue to review and evaluate new development proposals and project plans to make certain that it can provide adequate fire protection.

Mitigation Monitoring and Reporting

- A. Riverside County Fire Department shall review all development plans prior to issuance of building permits to ensure that development complies with City and Fire Department standards.

Responsible Parties: Planning Department, Riverside County Fire Department

Electricity

1. Existing Conditions

Imperial Irrigation District (IID) provides electric power in the City and the Sphere of Influence. IID delivers electric service by means of power generation and contractual agreements. There are six IID substations within or near the Planning Area, as follows:⁷⁶

- North La Quinta Substation – northwest corner of Adams Street and Westward Ho;
- La Quinta Substation – southwest corner of Avenue 48 and Jefferson Street;
- Jefferson Substation – Jefferson Street at the northeast corner of Avenue 52;
- Marshall Substation – northeast corner of Washington Street and Avenida Ultimo;
- Avenue 58 Substation – northwest corner of Avenue 58 and Monroe Street;
- Thermal Substation – south of Airport Boulevard and east of Highway 111.

Substations are gauged at 92 or 161 kilovolts (kV), and from there electrical power is decreased for distribution to customers at 12.47 kV. There are 8 proposed substations in the Planning Area and vicinity. Of these, one was discussed in the previous General Plan update between the

⁷⁶ Written communication provided by Guillermo Barraza, Customer Operations and Planning, Imperial Irrigation District, December 21, 2010.

easterly Sphere boundaries and the Jacqueline Cochran Regional Airport. This substation is still in the planning stages. Other proposed substation locations include:⁷⁷

- Near Avenue 54 and Monroe Street;
- At Van Buren Street and Avenue 64;
- Near Avenue 60 and Monroe Street;
- At Avenue 58 and Harrison Street;
- At Madison Ave and Avenue 64;
- At 54 and Harrison Street;
- At Avenue 62 and Harrison Street.

The City's Municipal Code (Chapter 13.24.110) requires that all utilities in new residential districts and subdivisions be undergrounded.

Based on historical use data for the Planning Area provided by IID, it was estimated that residential development consumes approximately 16,798 kilowatt hours per year. Estimated electricity usage rates by land use type are shown in Table III-40.

Table III-40
Estimated Electricity Usage Rates

Land Use	Annual Usage Rate
Residential	16,798 Kilowatt-hour/unit/year
Commercial	57.88 Kilowatt-hour/square feet/year
Industrial	57.88 Kilowatt-hour/square feet/year
Source: Terra Nova Staff estimates based on 2005 demand data for Planning Area provided by Hugo Valdez, Imperial Irrigation District, October 22, 2010.	

Based on these factors, existing residential and commercial development in the City consumed an estimated 765,590,714 kilowatt hours, while residents and commercial users in the Sphere consumed 29,242,547 kilowatt hours.

2. Impacts

Estimates of annual electrical demand for General Plan build out are based on the annual usage rates shown above. These rates applied to the proposed General Plan land uses at build out will result in electrical consumption of 1,645,145,600 kilowatt-hours per year (kwh/year). Single-family residential uses will account for 791,924,912 kwh/year of this amount, while multi-family uses will account for 101,224,748 kwh/year. Commercial uses will consume 716,607,636 kwh/year, and industrial development will use 35,388,304 kwh/year.⁷⁸

In the overall, increased demand associated with implementation of the General Plan will contribute to the regional demand for electricity. The City is completing a Greenhouse Gas

⁷⁷ Written communication provided by Guillermo Barraza, Customer Operations and Planning, Imperial Irrigation District, December 21, 2010.

⁷⁸ "La Quinta General Plan Air Quality Report," prepared by Terra Nova Planning and Research, July 2011.

Reduction Plan as part of the General Plan Update. The Reduction Plan includes measures to reduce energy use. In addition, the General Plan's Sustainable Community Element includes policies for resource conservation, including energy conservation for development projects in the City. These policies will reduce the relative consumption of electricity in the City as the General Plan builds out.

Imperial Irrigation District is a publicly traded company. It has established a rate structure that accommodates growth through the extension of facilities. Build out of the General Plan Area is expected to occur over time. Therefore, IID's expansion plans will be adjusted to accommodate it, and impacts are expected to be less than significant.

3. Mitigation

IID's rate structure includes expansion to accommodate expansion, which is expected to occur gradually over time. No significant impact is expected, and no mitigation measures are required.

Natural Gas

1. Existing Conditions

Southern California Gas Company provides natural gas services and facilities within the City and its Sphere of Influence. Residents use natural gas as the primary energy source for cooking and for heating space and water.

High-pressure transmission lines are located north of US Interstate 10 and deliver natural gas to the region. These lines are 36-inch diameter lines with 400 to 700 pounds per square inch (psi) pressure capacities. Limiting stations located throughout the region reduce pressure, and from there gas is distributed through supply lines ranging in diameter from 2 to 8 inches. Within the Planning Area, there are major natural gas supply lines within Washington Street and Highway 111. Regulator stations further reduce pressure and transfer it to distribution lines for delivery to residential and business customers.

Some areas of the City and Sphere have limited access to natural gas service. These include the southern portion of the City and Sphere, especially south of Airport Boulevard and east of Monroe Street, as well as within portions of the La Quinta Cove, and some older developments in the Sphere. In these areas, propane gas purchased from private firms is utilized.

Based on estimates provided by the Southern California Gas Company, average annual natural gas consumption for residences is 29,093 cubic feet (cf). The following table shows estimated natural gas consumption factors for various land uses.⁷⁹

⁷⁹ Data provided by Southern California Gas Company, August 13, 2010.

Table III-41
Natural Gas Consumption Factors

Residential	29,093 cubic feet/unit/year
Commercial	53.22 cubic feet/square feet/year
Industrial	53.22 cubic feet/square feet/year
Source: Terra Nova Staff estimates based on 2005 historical data provided by Southern California Gas Company, August 13, 2010.	

Based on these factors, residential, commercial and industrial gas customers in the City consumed 1,025 million cubic feet of natural gas. In the Sphere for the same period, residential and commercial customers used 37,819,780 cubic feet. In the overall, natural gas customers in the Planning Area used over 1 billion cubic feet of natural gas.⁸⁰

2. Impacts

At build out, there are expected to be 46,866 single-family and 6,236 multi-family dwelling units in the Planning Area. There is expected to be 12,364,631 square feet of commercial space, and 611,408 square feet of industrial space.

Applying the factors in **Table III-41** to these land uses, single-family units will use approximately 1,371,560,392 cubic feet of natural gas per year (cf/year), and multi-family units will use approximately 175,314,418 cf/year.⁸¹

For commercial and industrial uses, consumption will be approximately 658,912,550 cf/year and 32,539,142 cf/year, respectively. At build out, all development in the General Plan Planning Area is expected to consume approximately 2,238,326,502 cubic feet per year. This accounts for both existing and future development in the Planning Area. A variety of factors will determine actual natural gas consumption, including future levels of development, individual project designs, and the effectiveness of energy-conserving measures.

3. Mitigation

Southern California Gas Company has developed a rate structure that provides for facilities' expansion. Therefore, impacts are not expected to be significant impact and no mitigation measures are required.

⁸⁰ Terra Nova Staff estimates based on 2005 historical data provided by Southern California Gas Company, August 13, 2010.

⁸¹ Terra Nova Staff estimates based on 2005 historical data provided by Southern California Gas Company, August 13, 2010.

Domestic Water Services

1. Existing Conditions

Domestic and irrigation water within the City and most of the Sphere is provided by Coachella Valley Water District (CVWD). Groundwater is CVWD's primary domestic water source; water is extracted from deep wells located throughout the City and region. CVWD also relies on imported water, which is used to supply recharge basins located near Palm Springs, as well as in southern portion of the Planning Area south of Lake Cahuilla, and in Martinez Canyon, south and east of the City.

In general the water distribution system, owned and operated by CVWD, is located within the public right of way under existing streets. CVWD has water storage reservoirs within its service area. In the La Quinta Planning Area, there are 10 existing or planned tanks. The tanks range in capacity from 250,000 to 12 million gallons.

California Water Code requires that CVWD prepare and periodically update an Urban Water Management Plan (UWMP) to analyze current and future water supplies to ensure that it has sufficient supplies to serve land uses within its service area. Additional information regarding water resources is provided in Section III-P, Water Quality and Resources.

2. Impacts

A Water Supply Study (WSS)⁸² has been prepared to assess future water demands relative to supplies for the proposed General Plan at build out. As discussed in the WSS, the proposed General Plan will result in increased water demand associated with development, such as residential, commercial, and industrial, as well as open space amenities, street rights-of-way and others. An estimate of increased demand is shown in Section III-I. Water consumption factors and methodology utilized to project water demand are explained in the WSS. Based on the assumptions set forth therein, build out of the proposed General Plan Update is expected to result in an annual water demand of 54,467 acre-feet.

The General Plan will facilitate development that will cumulatively increase impacts to groundwater supplies in the region. The amount of potable groundwater in storage will also be reduced. As discussed in Section III-I, development in the region will occur gradually, as will impacts to groundwater supplies. For a more thorough discussion of impacts to water resources and quality, please see Section III-P.

3. Mitigation

Mitigation measures to reduce potential impacts associated with domestic water to less than significant levels are shown below. Additional measures are included in Section III-P, Water Resources/Quality.

⁸² "La Quinta General Plan Water Supply Study," prepared by Terra Nova Planning & Research, July 2011.

1. The City and Coachella Valley Water District shall review and evaluate all future development projects for their potential impact on local groundwater supplies.
2. The City shall continue to require the use of drought tolerant landscaping in new and rehabilitated public and private development, and shall encourage its use in existing development.
3. Future development shall be required to conform to standards set forth in Section 17921.3 of the Health and Safety Code, Title 20, California Administrative Code Section 1601(b), and applicable sections of Title 24 of the State Code. Measures set forth in these statutes include the installation of low-flow showerheads and faucets and low-flush toilets in all new construction.

Mitigation Monitoring and Reporting

- A. All development proposals shall be reviewed by the Planning Department and the City Engineer for their potential to result in adverse impacts to water quality and quantity. The City shall require that any potential significant impacts be mitigated prior to project approval.
Responsible Parties: Planning Department, City Engineer, Coachella Valley Water District

Wastewater Collection and Treatment

1. Existing Conditions

Sanitary sewer collection and treatment facilities are provided by the Coachella Valley Water District within most of the City and Sphere. Where sewer facilities are not available, residences utilize septic systems. These occur primarily in the Sphere.

There are two CVWD wastewater treatment plants that serve La Quinta. Water Reclamation Plant 7 (WRP-7) is located at Madison Street and Avenue 38, northeast of the City in Indio. It provides wastewater treatment for development in the City north of Miles Avenue. The capacity of WRP-7 is 5 million gallons per day (mgd), and the plant processes approximately 2.8 to 3.0 mgd. It has the capacity to expand to 7.5 mgd. Currently there is sufficient excess capacity; therefore, although expansion capacity exists, no such plans are imminent.⁸³

WRP-7 has facilities to treat wastewater to tertiary levels, which is suitable for irrigation but is not potable. The plant's tertiary capacity is 2.5 mgd. Planning is currently underway to design expansion of the tertiary system to 5.0 mgd, however no target date has been set for completion of this expansion. Current economic conditions have resulted in steady or slightly reduced demand. WRP-7 tertiary water provides irrigation for the Del Webb and Shadow Hills developments.⁸⁴

⁸³ "Engineer's Report on Water Supply and Replenishment Assessment: Lower Whitewater River Subbasin Area of Benefit, 2010-2011," prepared by Coachella Valley Water District, April 2010."

⁸⁴ Personal communication, Ray Salazar, CVWD-WRP-7, December 15, 2010.

The Mid-Valley Water Reclamation Plant (WRP-4), located in Thermal, serves lands in the City and Sphere that are located south of Miles Avenue. The Mid-Valley plant has a current capacity of just under 10 mgd, and processes approximately 5 mgd per day. Given the excess capacity, there are currently no plans for expansion at the Mid-Valley plant. WRP-4 does not include tertiary treatment facilities.⁸⁵ CVWD indicates that such facilities could be located at this plant in the future should demand warrant.⁸⁶

CVWD sewer lines utilize a system of trunk lines ranging in diameter from 4 to 24 inches. There are 18-inch diameter force mains in Washington Street, Jefferson Street, Madison Street, and Avenues 50, 58 and 60.

2. Impacts

Implementation of the General Plan will facilitate development that will increase demand on existing wastewater collection and treatment facilities. It is assumed that domestic wastewater flows are equivalent to the potable water demand projections, which average approximately 69.3 gallons per capita per day in 2010 and are projected to average 55.44 gpcd at build out. Using this approach, it is estimated that in 2010 the City of La Quinta generated approximately 4.1 million gallons per day (gpd) of wastewater. It is expected that, at build out, the City of La Quinta will generate approximately 4.4 million gallons per day of wastewater. Wastewater generation in the Sphere is estimated to be 140,471 gallons per day in 2010. At build out, the Sphere is projected to generate approximately 3.0 million gallons of wastewater per day, which is an increase of about 2.8 million gallons by 2035. Total wastewater generation in the Planning Area at build out is projected to be approximately 7.4 million gpd, which is an increase of approximately 3.1 million gallons over estimated 2010 conditions.

This level of wastewater generation is substantial; however it will not exceed the combined treatment capacity at the CVWD treatment plants serving the Planning Area. Further, CVWD continues to plan for expansion as needed. As future development occurs, existing facilities may need to be expanded to build out capacity to accommodate wastewater generation. Further, it is expected that existing development currently served by private septic systems will connect to community sewer systems over the course of General Plan build out.

Development in the General Plan area will occur gradually over time. The City and CVWD will have an opportunity to plan for increased development, including construction of new sewer collection facilities and increased treatment capacity. Nevertheless, growth trends will need to be monitored to ensure that adequate wastewater treatment facilities are provided to serve the Planning Area. As future development connects to sewer facilities, it will continue to be subject to connection fees.

⁸⁵ Personal communication, Kim Halsey, CVWD WRP-4, December 14, 2010.

⁸⁶ "Draft Coachella Valley Water District Urban Water Management Plan," prepared by Montgomery Watson Harza, December 2010.

3. Mitigation

Although sufficient capacity appears to be available to serve future development through existing treatment facilities, the City and CVWD will need to continue to monitor growth to ensure that adequate capacity is available as the Planning Area builds out.

In order to ensure that potential impacts associated with wastewater collection and treatment are reduced to less than significant levels, the following mitigation measures will be implemented.

1. To the greatest extent practicable, the City shall require that all new development be connected to sanitary sewer service.
2. The City shall ensure coordination with the Coachella Valley Water District and to assure that existing and future extended sanitary sewer facilities are adequate to meet the needs of existing and expected future development.
3. The City and Coachella Valley Water District should encourage the replacement of existing septic systems with connection to sanitary sewer facilities to the greatest extent feasible.

Mitigation Monitoring and Reporting

- A. The City Planning and Public Works Departments shall confer and consult with Coachella Valley Water District to implement City-wide wastewater collection and treatment facilities and service.

Responsible Parties: Planning Department, Public Works Department, Coachella Valley Water District.

- B. All development proposals for future development shall be reviewed by the Planning and Public Works Departments to ensure connection with sanitary sewer services.

Responsible Parties: Planning Department, Public Works Department, Coachella Valley Water District.

Solid Waste Management

1. Existing Conditions

The City has a franchise agreement with Burrtec Waste and Recycling Services, LLC (Burrtec) for the provision of solid waste disposal in the City and Sphere. Non-hazardous household, commercial and most non-hazardous industrial solid waste collected in the Planning Area is taken to the Edom Hill Transfer Station in Cathedral City. From there, waste is transported to the Lamb Canyon regional landfill, which is owned and operated by Riverside County.

The Lamb Canyon landfill is located between the cities of Beaumont and San Jacinto at 16411 Lamb Canyon Road (State Route 79). The landfill is permitted to receive a maximum of 5,000 tons per day. As of January 2010, the landfill had a total remaining capacity of approximately 9.2 million tons. During second and third quarter 2009, average daily receipts totaled approximately 1,697 tons per day. The landfill site encompasses 1,189 acres, of which approximately 581 acres are currently permitted for landfill use, and 145 acres are permitted for

waste disposal. It is projected that current landfill capacity will extend to 2021, at a minimum. The Lamb Canyon landfill has potential for expansion.⁸⁷

In future, solid waste from the Planning Area may also be transported to other regional landfills, including the Badlands facility, located in Moreno Valley, and the El Sobrante landfill in Corona. Both of these landfills currently have excess capacity.

Solid waste recycling is also provided by Burrtec, which collects paper, plastic, glass and aluminum from residences and businesses. Mixed recyclables are transferred to Burrtec facilities in northern San Diego County.⁸⁸

Burrtec also has green waste recycling capabilities. Brush and other greenwaste from La Quinta are taken to the Edom Hill Transfer Station, and are eventually composted or sent to the Colmac Energy plant in Mecca for use as bio fuel.

The Integrated Waste Management Act (AB 939), passed in 1989, requires California cities and counties to meet a variety of recycling and reuse goals, including diverting at least 50% of their solid waste stream through new and ongoing waste and recycling programs. La Quinta is meeting these State-mandated goals.

Data from the California Integrated Waste Management Board indicates that as a result of the enactment of this legislation, recycling efforts annually conserve enough energy to provide power for 1.4 million California homes, reduce water pollution by 27,047 tons, save 14 million trees, reduce air pollution by 165,142 tons, and reduce greenhouse gas emissions by an amount equal to taking 3.8 million passenger cars off the highway.⁸⁹

Solid waste generated by construction and demolition sites may accounts for as much as 22% of the solid waste stream.⁹⁰ Prior to the issuance of grading permits, the City refers developers to Burrtec environmental staff to develop a recycling plan to recycle at least 50% of these materials.⁹¹ Although not yet mandated, these reductions can result in substantial cost savings to developers. It is expected that these will be required in the near future.

In 2009, residential development in the City generated 11,414.6 tons of solid waste; commercial development generated 3,615.3 tons. Approximately 4,393.4 tons of recyclables were collected from residential curbside pick ups; approximately 3,908.1 tons of residential greenwaste were collected curbside. Commercial on-site pick up units accounted for 1,050.5 tons of recyclables, and on-site greenwaste totaled 4,607.1 tons.⁹²

⁸⁷ Written communication, Ryan Ross, Riverside County Waste Management Department, December 17, 2010.

⁸⁸ Personal communication, Ken Stevens, Burrtec District Environmental Coordinator, December 14, 2010.

⁸⁹ National Recycling Coalition's Environmental Benefits Calculator using California data from 2001 studies by UC Berkeley and the National Recycling Coalition, found at CalRecycle Internet Search, December 20, 2010.

⁹⁰ Statewide Waste Characterization Study, prepared by the California Integrated Waste Management Board, December 2004.

⁹¹ Personal communication, Ken Stevens, Burrtec District Environmental Coordinator, December 14, 2010.

⁹² Data for City of La Quinta provided by Burrtec, January 2010.

Hazardous Waste⁹³

The information above is applicable for non-hazardous household, commercial and most industrial solid waste. Household hazardous waste (HHW), such as household cleaning chemicals, flammables, batteries, motor oil, antifreeze and paint, and others are collected at three permanent facilities provided by the Riverside County Waste Management Department. These facilities also accept sharps and needles. The HHW collection facilities are located in Palm Springs, Lake Elsinore, and Riverside, and are open every Saturday except for designated holidays. There are also a number of one-day collection “events” at various locations and dates throughout the County, including the City’s Civic Center.

Coachella Valley Area Regional Antifreeze, Battery, Oil (and Filter) and Paint (Latex) Collection Facilities (ABOP) collect only these specified HHWs. There are three facilities, including two in the Coachella Valley: at the Edom Hill Transfer Station in Cathedral City and the Coachella Valley Transfer Station in Coachella. The Edom Hill ABOP facility operates on Saturdays, and the Coachella facility is open Monday through Saturday.

The County also administers special programs such as collection of construction and demolition materials and commercial recycling.

County-approved hazardous waste disposal firms (private contractors) collect hazardous industrial waste, which is disposed of at sites other than County landfills. In general these wastes have been disposed of at Cattleman’s Hill in central California. Hazardous waste and hazardous waste disposal is discussed in further detail in Section III-G, Hazards and Hazardous Materials.

2. Impacts

Development facilitated by build out of the General Plan will result in increased generation of solid waste. The three existing landfills have long-term capacity sufficient for expected solid waste generated in the Planning Area, and Burrtec plans on providing service to accommodate future development. As the City continues to implement existing and initiate new recycling efforts, it expected that impacts to regional landfills will be decreased.

Based on solid waste generation factors provided by the California Integrated Waste Management Board applied to land uses in the proposed General Plan Land Use Plan provides an estimate of solid waste generation at build out. The following tables show estimated solid waste generation in the Planning Area.

⁹³ http://www.rivcowm.org/HHW_Schedule.htm#_HHW_Collection_Locations

**Table III-42
Solid Waste Generation at
General Plan Build Out**

Land Use Type	Generation Rate	Unit Type	Units (DU/Sq. Ft.)	Annual Tons of Solid Waste
Single Family	2.0400	tons/unit/year	46,866	95,606.64
Multi Family	1.1700	tons/unit/year	6,236	7,296.12
Retail/Commercial ¹	0.0024	tons/sf/year	12,364,631	29,675.11
Industrial	0.0108	tons/sf/year	611,408	6,603.21
Total				139,181.08

¹ Assumes development of all General, Tourist and Village Commercial based on retail/commercial factor.

Source: Terra Nova staff estimates based on California Integrated Waste Management Board compilation of waste generation rates. Rates used are from Ventura County Solid Waste Management Department, "Guidelines for Preparation of Environmental Assessments of Solid Waste Impacts", September 1992, and "DEIR for North Hills Development in Santa Clarita", December 1991.

At build out, implementation of the General Plan is expected to result in approximately 53,103 dwelling units. Of these, approximately 46,866 will be single-family units, and approximately 6,236 will be multi-family units. Up to approximately 12,364,631 square feet of commercial development, which is assumed to be primarily retail uses, and 611,408 square feet of industrial development will also be constructed. As shown above, based on this level of development, approximately 139,181 tons of solid waste would be generated per year. On a daily basis, this equates to 381 tons of solid waste. Actual waste generation will depend on future levels of development, and participation in stream flow diversion programs.

There are no proposed land uses that are expected to generate large quantities of solid waste or create conditions where severe hazardous wastes are produced. Development facilitated by the General Plan will nonetheless result in increased volumes of solid waste generation. Therefore, the City and Burrtec will need to continue to monitor these levels to ensure that disposal of solid and hazardous wastes generated in the Planning is safe and cost-effective.

3. Mitigation

The most effective way to reduce impacts to landfills is through reduction of solid waste at the source. The following mitigation measures are intended to further reduce the amount of waste generated in the Planning Area, promote the City's compliance with AB 939 and AB 341, and mitigate impacts to landfills by reducing the amount of waste generated.

1. The City shall continue to consult and coordinate with Burrtec to sustain and exceed the provisions of AB 939 and AB 341 where possible through expanding its recycling programs and divert resources from the waste stream for return to productive use.
2. Commercial and industrial establishments shall be required to comply with State mandates established under AB 341 to reduce the amount of packaging and potential waste associated with product manufacturing and sales.

3. The City and Burrtec shall continue to include recycling provisions for single-family and multi-family residential dwelling units in their solid waste disposal contracts.
4. Prior to the issuance of building permits, the City shall continue to refer project developers to Burrtec for development of construction and demolition solid waste recycling plans to divert a minimum of 50% of C&D debris from the waste stream.

Mitigation Monitoring and Reporting

- A. Prior to the issuance of building permits, the City Planning and Building and Safety Departments shall review project development plans and confer and coordinate with project developers to assure the provision and maintenance of recycling containers that correspond with current City programs and those planned in the future, including those for construction and demolition solid waste.

Responsible Parties: Planning Department, Building and Safety Department, Burrtec Waste and Recycling Services, LLC.

Public Transportation Services

1. Existing Conditions

The Sunline Transit Agency provides public transportation services to residents and visitors throughout the Coachella Valley, including the City of La Quinta. There are two primary Sunline routes within the City of La Quinta. Bus line 111 generally runs along Highway 111, thereby providing public transportation services to destinations located in the vicinity of Highway 111. Bus Line 70 generally runs along Washington Street, providing public transportation to northern and southern destinations within the City of La Quinta.

2. Impacts

Implementation of the proposed General Plan is expected to increase the demand for public transportation services. The Traffic and Circulation discussion, Section III-O below further addresses current and planned future bus routes, other public transportation opportunities, and potential impacts associated with build out of the General Plan.

3. Mitigation Measures

1. The City of La Quinta shall continue to coordinate with SunLine Transportation Agency to establish new bus stop locations and facilities as demands warrant.

N. Recreational Resources

Introduction

The City of La Quinta has numerous recreational resources that improve the quality of life for its residents and make La Quinta a desirable destination. This section assesses impacts on recreational resources from future growth and development brought on by the La Quinta 2035 General Plan Update. It also provides mitigation measures to reduce impacts on existing recreational facilities and impacts associated with development of new facilities.

Thresholds of Significance/Criteria for Determining Significance

Article 5, Section 15064 of the CEQA Guidelines provides guidance for determining the significance of the environmental effects caused by a project. Appendix G of the CEQA Guidelines provides a list of environmental factors that potentially may be affected by completion of a project. The La Quinta 2035 General Plan Update would have a significant effect on Recreational Resources if it is determined the plan:

- a) Would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- b) Includes recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

1. Existing Conditions

The General Plan Update Planning Area, and particularly land within the City limits, offers a variety of passive and active recreational opportunities for residents and visitors to the region. There are approximately 5,259 acres of open space areas set aside for recreational facilities in the City. These developed open space recreational areas include a variety of city owned and maintained parks and facilities, County owned parks, Desert Recreation District facilities and public and private golf courses. In addition, there are approximately 6,933 acres of natural open space areas in the City Limit offering hiking trails, equestrian trails, and other passive recreation opportunities. The City of La Quinta also offers numerous golf courses and resorts, making it a premier destination for golf.

City Recreational Resources

The City owns, operates and maintains numerous park facilities throughout incorporated areas of the General Plan Update Planning Area. Within the City Limits are five mini parks, including Eisenhower Park, Seasons Park, Saguaro Park, Desert Pride and Velasco Park. These parks are generally one acre or less than one acre in size and are located within neighborhoods. Mini parks provide limited amenities including small children play areas, playground equipment, turf areas, walking paths and areas for seating.

Neighborhood parks are larger than mini parks and provide both active and passive recreational needs for the community. These include parks such as Fritz Burns Park, Adams Park, Monticello

Park, and Pioneer Park. Neighborhood parks are generally two to ten acres in size and can include large field facilities for sporting events, children play areas, interactive water features, dog park facilities, picnic and barbecue amenities, restroom, and other additional community features. Pioneer Park is the newest neighborhood park in La Quinta and provides 2 acres for a playground, dog park, and passive seating areas. The Fritz Burns Park provides a swimming pool operated by Family YMCA of the Desert.

The third type of city-operated park includes community parks. Community parks are generally 15 to 40 acres in size and provide both large-scale recreational amenities, such as baseball fields, soccer fields, softball fields, basketball courts, skate parks, and playgrounds, and also restrooms, barbecues, public art displays, water features, picnic facilities, and benches. There are three community parks in La Quinta including the 16.75-acre La Quinta Sports Complex, the 18-acre La Quinta Park, and the 17.5-acre Civic Center Campus. Community parks provide recreational resources for City residents and the surrounding region.

The City of La Quinta owns and operates open space areas and trail systems throughout the incorporated limits. The Fred Wolff Nature Preserve is a 19-acre natural open space area located just off the Bear Creek Trail, on the western portion of the Cove area. The City purchased the 19 acres in June of 2003 as a nature preserve, and to provide additional opportunities for hiking and learning about the desert plant species and wildlife. The Cove Oasis Trailhead is another natural open space area located at the southernmost part of the Cove. This open space area includes 114 acres and includes amenities such as hiking trails, picnic tables and benches, water fountains, public art displays, and areas available for event rentals. Many area trails connect at the Cove Oasis Trailhead including the Cove to Lake Trail, Boo Hoff Trail, Bear Creek Oasis Trail, Bear Creek Canyon and the city maintained Bear Creek Trail. Bear Creek Trail is a 4.75-acre hiking path that connects the Fred Wolff Nature Preserve with the Cove Oasis Trailhead.⁹⁴

The City also operates and maintains the La Quinta Senior Center and La Quinta Museum. The La Quinta Senior Center provides services such as classes, seminars, special events, and weekly programs to adults 55 years of age and older. The La Quinta Museum provides local residents cultural activities, including art exhibits, programs, and events.

Desert Recreation District Facilities

The Desert Recreation District provides park facilities and recreation programs throughout the Coachella Valley. Once known as the Coachella Valley Recreation and Park District, the Desert Recreation District owns and operates the La Quinta Community Center, and is proposing a Discovery Center near Lake Cahuilla.

The La Quinta Community Center and Park is located off Avenida Montezuma, and includes a 6.5-acre park and 5,000 foot community center. The 6.5-acre park includes ballfields, basketball courts, playground, picnic tables, barbecues, restrooms, an outdoor amphitheater, outdoor exercise facilities, and drinking fountains. The Community Center includes the La Quinta Fitness Center, kitchen, and concessions.

⁹⁴ “Parks and Trails” www.la-quinta.org, accessed November 22, 2010.

The proposed Coral Mountain Discovery Park will be a partnership between the Bureau of Land Management and the Desert Recreation District, and encompass 620 acres of open space, of which 123 acres will be available for public access. The public access area will provide interpretive trails, picnic areas and a learning center. The Discovery Park will be the Coachella Valley's first archaeological park and provide residents the opportunity to learn about the regions rich cultural and natural heritage.⁹⁵

Riverside County Regional Park and Open Space District

Riverside County operates Lake Cahuilla Regional Park located in southwestern portion of La Quinta. The 710-acre Regional Park includes a 113-acre lake, 20 equestrian campsite, 30 primitive individual campsites, showers, and dump stations, as well as other amenities including shore fishing, equestrian and hiking trails, and picnicking facilities. Swimming is not allowed in Lake Cahuilla, however a seasonal swimming pool is open from mid April to mid October.⁹⁶

Bureau of Land Management Land

The Bureau of Land Management (BLM) provides and manages large areas of open space throughout the southwestern portion of the City limits and the Sphere of Influence. Although located within City of La Quinta jurisdictional boundaries, the General Plan Update will not have jurisdiction over these federally managed public lands. The Santa Rosa and San Jacinto National Monument were established by the federal government in 2000 "in order to preserve the nationally significant biological, cultural, recreational, geological, educational, and secure now and for future generations the opportunity to experience and enjoy the magnificent vistas, wildlife, land forms, and natural and cultural resources in these mountains and to recreate therein."⁹⁷ The Monument encompasses nearly 272,000 acres, however the portion closest to La Quinta includes the 61,600-acre Santa Rosa Wilderness. The Bear Creek Canyon Trail, located in the southern portion of the Cove area, provides entrance into the Santa Rosa Wilderness.

Golf Courses

La Quinta has numerous public and private courses throughout the community. There are several well-known courses throughout the incorporated Planning Area, including PGW West, SilverRock Resort, La Quinta Resort Golf Course, Trilogy Golf Club, and a number of private courses within country club communities.⁹⁸

⁹⁵ Desert Recreation District, www.myrecreationdistrict.com, accessed November 22, 2010.

⁹⁶ Lake Cahuilla, Riverside County Parks, www.rivcoparks.org/parks/lake-cahuilla/lake-cahuilla-recreation-area-home/, accessed July 5, 2011.

⁹⁷ Santa Rosa and San Jacinto Mountains National Monument, <http://www.blm.gov/>, accessed November 22, 2010.

⁹⁸ <http://www.playinlaquinta.com/golf.html>

Sphere of Influence Recreational Resources

The Sphere of Influence has no parks or other recreational uses. The eastern Sphere of Influence Planning Area also has schools, including Westside Elementary School, and is adjacent to Coachella Valley High School.⁹⁹ These schools provide athletic fields and hardtop courts, however these uses are generally for school purposes. Equestrian facilities are found in the eastern Sphere of Influence, including the Mountain View Equestrian Center along Jackson Street, just south of Avenue 58th Avenue.¹⁰⁰ There are local equestrian trails throughout the eastern Sphere of Influence that provide places for riding.

Quimby Act

California passed the Quimby Act in 1975, allowing local governments to pass ordinances requiring developers to set aside land, donate conservation easements, or pay in-lieu of fees for the development of new parks and recreational facilities. Local governments have come to depend on the Quimby Act for new facilities, or to upgrade existing facilities, as a result of new growth and development. La Quinta Municipal Code Section 13.48 establishes criteria for dedicating land, or payment of in lieu fees for construction of new parks or recreational facilities or rehabilitation of existing facilities. The ordinance states that residential subdivisions, containing less than five parcels, and nonresidential subdivisions, are exempt from dedication or park fees. All other residential developments are required to pay a park development fee, dedicate land, or both. Section 13.48.050 states that parkland dedication requirements shall equal three acres of parkland per one thousand people in a new subdivision. The number of people in a new subdivision is determined by multiplying the number of dwelling units in the subdivision by the average household size. Average household size is based on the latest U.S. Census information.

2. Project Impacts

The La Quinta 2035 General Plan Update will facilitate new development that will create demand for new parks and recreational facilities. Implementation of General Plan Update will result in approximately 8,114 new residential units within the City Limits and 20,669 new residential units within the Sphere of Influence. At build out, the total number of dwelling units within the City will be approximately 31,603 units, and 21,500 within the Sphere of Influence. Total build out population is expected to be 79,956 in the City Limits and 54,396 within the Sphere of Influence, for a grand total of 134,352 throughout the General Plan Update Planning Area.

Impacts on Existing Neighborhood and Regional Parks

The General Plan Update will facilitate new residential development throughout the Planning Area, and increase the population within City Limits. New growth will put pressure on existing facilities, if no new recreational facilities are built. As mentioned above, however, there are

⁹⁹ <http://www.maps.google.com/>

¹⁰⁰ <http://www.mountainviewequestriancenter.com/About-Us.html>

already 5,259 acres of recreational open space, and 6,933 acres of natural open space within the City.

The General Plan requires the provision of 5 acres of parkland for each 1,000 population. Based on this standard, a population of 79,956 at build out would require a total of 395 acres of parkland. With implementation of required fees for new development projects, implementation of the General Plan Update will have less than significant impacts to existing parks within the City.

Implementation of the General Plan Update has the potential to result in the development of approximately 20,699 new residential units within the Sphere at build out. Total population within the Sphere is expected to reach 54,396 residents. The General Plan requires 5 acres of parkland per 1,000 residents. Based on this standard, a population of 54,396 residents at build out would require a total of 272 acres of parkland, if the Sphere were annexed to the City. With implementation of required fees for new development projects, implementation of the General Plan Update will have less than significant impacts to existing parks within the City.

3. Mitigation Measures

None required.

O. Transportation/Traffic

Introduction

This section of the EIR describes the existing condition of traffic and circulation within the City and Sphere-of-Influence, the vicinity and the region. It also analyzes the potential impacts of the proposed La Quinta General Plan update and sets forth strategies and mitigation measures that will be effective in reducing impacts. A wide range of data and information, ranging from research and analysis conducted for specific projects in the area, to regional-scale planning and environmental documents, have been used in researching and analyzing the General Plan project and its potential effects.^{101, 102, 103} These include detailed analysis of major roadway segments, as well as detailed analysis of future traffic and circulation conditions^{104,105}.

General Plan Traffic Impact Analysis

A traffic impact analysis was prepared for the General Plan update by Iteris, Inc. to assess the existing roadway network, collect data on and measure the level of use and service along the existing roadways in the General Plan study area. The traffic impact analysis also identifies potentially significant traffic-related impacts associated with build out of the City's General

¹⁰¹ "City of La Quinta General Plan Circulation Element Update Traffic Impact Analysis" prepared by Iteris, Inc. May 2012.

¹⁰² "County of Riverside General Plan", prepared by County of Riverside Transportation and Land Use Management Agency, October 2003.

¹⁰³ "Riverside County Transportation Analysis Model (RivTAM)" prepared by the Riverside County Transportation Department, 2008.

¹⁰⁴ "Washington Street & Highway 111 TSM/TDM Corridor Study" prepared by VRPA Technologies, Inc. June 2009.

¹⁰⁵ "Panorama (Specific Plan No. 362) Traffic Impact Analysis" prepared Urban Crossroads, Inc., July 5, 2007.

Plan, as well as surrounding lands, and sets forth detailed mitigation measures and strategies designed to reduce potential impacts to levels that are less than significant.

The primary goals of the La Quinta General Plan traffic analysis was to: (1) documentation of existing traffic volumes and operating conditions at all major intersections and along major roadway within the City and Sphere of Influence; (2) evaluation of existing plus projected background growth, plus General Plan build out traffic for 2035 conditions; (3) evaluation of existing plus General Plan build out traffic for 2035 conditions; and (4) determination of improvements and system management action needed to achieve City level of service requirements.

Thresholds of Significance/Criteria For Determining Significance

The following thresholds or criteria are not strictly those recommended in Section 15064 of the CEQA Guidelines. Rather, they are derived from Appendix G of the CEQA Guidelines, which is used to determine the level of potential effect, and whether a Negative Declaration or Mitigated Negative Declaration may be issued, or whether an Environmental Impact Report is to be prepared. The subject La Quinta General Plan update, and the General Plan Land Use Alternatives, would have a significant effect on transportation/traffic if they:

- a.) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
- b.) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
- c.) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- d.) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- e.) Result in inadequate emergency access.
- f.) Result in inadequate parking capacity.
- g.) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The following discussion provides some essential background information to facilitate a better understanding of the analysis, which follows.

Levels of Service

The capacity of a segment of roadway or an intersection is typically characterized as “Level-of-Service”. As gauged for mid-block (segment) travel, Level-of-Service (LOS) is a qualitative

measure describing the character and efficiency of the flow of traffic. For intersections, the LOS is defined quantitatively as the number of seconds the vehicle is delayed in passing through the intersection. LOS includes a range of alphabetical connotations “A” through “F”, used to characterize roadway operating conditions. LOS A represents the best/free-flow conditions and LOS F indicates the worst/system failure.

Intersections generally represent the most constrained portion of the roadway network. The Transportation Research Board Highway Capacity Manual expresses the Level of Service at an intersection in terms of delay or waiting time to get through the various intersection approaches. For signalized intersections, average total delay per vehicle is used to determine the LOS. Intersection LOS is defined quantitatively in **Table III-43** below. A more detailed discussion of LOS values can be found in the General Plan Traffic Impact Analysis in the EIR Technical Appendices.

Mid-block Levels of Service are represented as volume to capacity ratios, or vehicle demand divided by roadway capacity. In general terms, as the ratio approaches 1.00 or maximum capacity, the roadway approaches LOS F. However, it is important to keep in mind that for mid-block, the LOS is meant to define a qualitative rather than a quantitative measure of operation. The LOS assignment is only marginally useful in characterizing capacity, and is not meant to determine actual volumes that a particular roadway segment can carry. Mid-block volumes and volume to capacity ratios (V/C) should be used as a means of monitoring traffic flows toward the intersections and can inform traffic engineers of areas where further analysis is warranted.

A variety of conditions and mix of improvements can enhance mid-block roadway capacity. Adding through and turning lanes increases capacity, as do the inclusion of raised medians and restricted access on a roadway. Restricted access and raised medians increase roadway capacity by reducing the number of vehicle conflict points and improving traffic flows. Restricted access avoids loss of capacity caused by interruptions and disruptions to traffic flow resulting from vehicles coming onto or leaving the roadway.

Table III-43
Level Of Service Description
Mid-Link and Uninterrupted Flow

Level of Service	Quality of Traffic Flow	Volume/Capacity Ratio
A	Free flowing, low volumes, high speed; speed not restricted by other vehicles in the traffic stream.	0.00 - 0.60
B	Operating speeds and maneuverability in the range of stable flow, but presence by other traffic begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.	0.61 - 0.70
C	Operating speeds and maneuverability significantly controlled by other traffic Quality of operations still within the range of stable flow.	0.71 - 0.80
D	Tolerable operating speeds, high traffic density but stable flows; often used as design standard in urban areas. At this level, speed and freedom to maneuver are severely restricted. Drivers experience general discomfort and inconvenience.	0.81 - 0.90
E	At or near maximum traffic volume a roadway can accommodate during peak traffic periods. Low speed but uniform traffic density. "Maximum Capacity". Highly susceptible to breakdowns in flow.	0.91 - 1.00
F	System failure; long queues of traffic; unstable flows; stoppages of long duration; traffic volume and speed can drop to zero; traffic volume will be less than the volume which occurs at Level of Service E.	Not Meaningful

Source: Highway Capacity Manual, Transportation Research Board - Special Report 209, National Academy of Science, Washington, D.C. 2000.

Table III-44
Intersection Level Of Service Descriptions

Level of Service	Description	Signalized Intersection Delay (seconds per vehicle)	Unsignalized Intersection Delay (seconds per vehicle)
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	< 10	< 10
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	>10 and < 20	>10 and < 15
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20 and < 35	>15 and < 25
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues.	>35 and < 55	>25 and < 35
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	>55 and < 80	>35 and < 50
F	Forced flow. Represents jammed conditions. Backups form locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	> 80	> 50

Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, Washington, DC, 2000.

The following table describes the various capacity values assigned for differing roadway sizes and levels of service. Capacity is generally defined as the number of vehicles that may pass over a section of roadway in a given time period under prevailing conditions. However, capacities of roadways are most restricted by intersection design and operation, which are discussed further below. Typically, the PM peak hour is the heaviest traffic flow of the day. It should be noted that in the planning area the peak hour operations are spread across a greater time period.

Table III-45
City Roadway Classifications
Level of Service Volumes/Capacity Values
(Average Daily Trips – ADT)

Facility Type	Lane Configuration	LOS A (60%)	LOS B (70%)	LOS C (80%)	LOS D (90%)	LOS E (100%)	LOS F
Local	2U	<5,490	5,490 - 6,390	6,390 - 7,290	7,290 - 8,190	8,190 - 9,000	>9,000
Collector	2U	<8,540	8,540 - 9,940	9,940 - 11,340	11,340 - 12,740	12,740 - 14,000	>14,000
Modified Secondary	2D	<11,590	11,590 - 13,490	13,490 - 15,390	15,390 - 17,290	17,290 - 19,000	>19,000
Secondary	4U	<17,080	17,080 - 19,880	19,880 - 22,680	22,680 - 25,480	25,480 - 28,000	>28,000
Primary	4D	<25,560	25,560 - 29,800	29,800 - 34,080	34,080 - 38,340	38,340 - 42,600	>42,600
Major	6D	<36,600	36,600 - 42,700	42,700 - 48,800	48,800 - 54,900	54,900 - 61,000	>61,000
Augmented Major	8D	<45,600	45,600 - 53,200	53,200 - 60,800	60,800 - 68,400	68,400 - 76,000	>76,000

Source: La Quinta General Plan Traffic Impact Analysis, 2012 and Highway Capacity Manual, 2010.

Regional and Local Traffic Model

As noted in the introduction to this discussion, the La Quinta General Plan Traffic Analysis Model (LQTAM) is a highly detailed, fine-grained level of analysis that has been developed in a manner consistent with the Riverside County Transportation Analysis Model (RivTAM), which is also the basis for regional transportation planning coordinated by CVAG. In addition to providing modeling consistency from the local through the regional level, RivTAM minimizes the time and effort needed to maintain and update this transportation planning and management tool.

Specifically, the La Quinta traffic model consists of a traditional four step modeling process including (1) trip generation, (2) trip distribution, (3) mode split (choice), and (4) traffic assignment. Two model scenarios were included in the La Quinta TAM, namely the base year 2009 and the forecast year 2035. To work from a more refined level, the traffic modeling process begins with defining the traffic analysis zones (TAZ) and the roadway network, establishing efficient/logical traffic routes, collecting land use and socio-economic data on each TAZ, calculating trip generation in each TAZ, distributing traffic and its assignment to individual road segments. Each major component of the La Quinta model is described below.

Zone and Network System

The regional traffic model divides the General Plan planning area from just a few TAZs to a detailed modeling area of 123 TAZs following RivTAM zone boundaries, General Plan land use boundaries, digital street centerlines and other GIS data, thereby greatly increasing the detail of the analysis. Traffic volumes have been generated for each TAZ based upon the mix and acreage of each land use in each TAZ, with land uses being factored into the model as either trip “productions” or “attractions.” Traffic from outside the planning area is based upon the larger scale, regional RivTAM TAZ structure, and interacts with planning area traffic at various cordon stations located along planning area boundaries. A forecast of traffic volumes is produced by the model and is based upon the TAZ system.

The model then loads the traffic onto the roadway network, and approximates how actual traffic enters and utilizes the local roadway system. The roadway network focuses on major streets and generally excludes local streets. Traffic generated in each zone is placed on the network at primary connectors, called “centroids,” identified by the model.

The model also considers a variety of roadway characteristics, including the type of roadway, free-flow speeds, and hourly travel per lane. Likely network operations are also refined by speed adjustments developed to increase sensitivity to roadway constraints (Please refer to the La Quinta General Plan TIA for an illustration of the TAZ’s and a complete breakdown of the various land uses within each TAZ).

The current land use patterns were used as the basis for the La Quinta General Plan TAZ system. The TAZ pattern is tailored specifically to the City and planning area in order to provide the most accurate data possible. The model distributes the projected volume of traffic that will occur due to the build out of the General Plan land use plan and factors growth in other areas of the Valley. From this information the design requirements to maintain acceptable traffic flows are determined.

Depending upon the level of land use integration within each TAZ, traffic generated within each TAZ may stay within the TAZ or cross TAZ boundaries, which typically requires travel on a higher capacity street such as a collector or arterial roadway. TAZs are selected planning subareas typically defined by major roadways. The interaction of land uses within each TAZ is a measure of land use efficiency, depending on the degree to which development generates local traffic or requires extended use of the arterial roadway network.

Trip Generation

Trip generation provides the raw data for traffic modeling. Vehicle trips generated within each TAZ of the modeling area are based on land use data as designated by existing land uses and the General Plan Land Use Element. The RivTAM model first analyses sixteen (16) "land use to employment" conversion rates, ranging from very low density residential to commercial, and also including industrial, institutional and open space uses.

The General Plan traffic analysis also uses eleven (11) separate “home-based” trip definitions and two “non-home-based” definitions. Some trips originate from or are destined to the home, while other trips are between non-home destinations, such as from work to lunch or the doctor’s office, or from dinner to a movie.

The RivTAM and La Quinta models were used to derive the average trip generation rates per the various land uses, and were modified for City-specific application. The total number of vehicle trips produced in or attracted to a geographic area is directly related to the land use and demographic variables found in each TAZ. The model estimates the number of peak season vehicle trips that will be produced on an average weekday for each analysis zone.

Trip Distribution and Traffic Assignment

For each of the 123 TAZs developed for the La Quinta model, the volume of traffic has been calculated and broken down and the trip generation associated with each has been calculated. Once accomplished, the trip distribution and assignment functions of the City traffic model were then implemented. Next a general directional distribution of these trips was made and then finally assigned to specific streets. As mentioned, trips are either attractions or productions; that is, land uses are either drawing trips into the TAZ or are exporting trips. Typically, this distribution of trips is accomplished using a “gravity distribution model”, based on the formula that the distribution of trips is proportional to the “attractiveness” of the land use and the distance (or travel time) from the point of trip production. Each type of trip or trip purpose has its own specific travel time distribution function or curve.

Traffic is assigned to the roadway network over distinct time periods and to specific route paths of the various trip interchanges between TAZs identified in the trip distribution process. The end result of these forecasts of daily traffic volumes yields the aggregate assignment of trips to roadways between and connecting TAZs throughout the City and planning area. The traffic assignment process for the General Plan traffic model has also been adapted from procedures used in the Valley-wide RivTAM model.

1. Existing Conditions

Within the urbanized and developing areas of the City and planning area, the roadway network has been constructed and is conveying traffic. The following briefly discusses the major regional and local roadways serving the planning area, as well as conditions at major intersections within the City. While Levels of Service for roadway links or segments are discussed, Levels of Service at intersections are a more meaningful measure of actual roadway operating conditions. The tables that follow provide additional information on existing roadway link and intersection conditions in the City and General Plan study area. It should also be kept in mind that operating conditions are gauged against current and not ultimate levels of street and intersection improvements.

Regional Roadways

Those roadways that provide intra-Valley and super regional connections are herein termed regional roadways. They include State Highways 111 and 86, and U.S. Interstate-10. State Highway 111 begins at its juncture with Interstate-10 three miles west of Palm Springs and extends southeast to Brawley in the Imperial Valley. Highway 86 connects the planning area and other parts of the Coachella Valley with Imperial County and Mexico. Interstate-10 connects the Los Angeles region with Arizona and other cities and states to the east. Together, these important roadways provide regional, interstate and international connections for the City and the Coachella Valley.

State Highway 111

State Highway 111 has been built along the old Bradshaw Trail, which extended along the base of the Santa Rosa Mountains. Highway 111 is an important intra-regional connector serving the local cities. Some through-traffic appears to have moved north to Fred Waring Drive and I-10 in response to congestion along Highway 111. However, the La Quinta traffic model shows that approximately 58 percent of traffic on Highway 111 does not originate in and is not destined for locations within the City, and is simply passing through along this roadway. In the City, this roadway is built out to six-lanes divided. Highway 111 serves a wide mix of commercial land uses. Existing traffic volumes range from approximately 29,726 VPD east of Washington Street and approximately 38,037 VPD west of Jefferson Street. Intersections with Highway 111 are currently operating at Level of Service (LOS) C, with the exception of its intersection with Washington Street (LOS D in 2010) and mid-block segments operate at LOS C or better. Sunline bus service is available along its length and this roadway serves as a designated truck route.

Highway 86S Expressway

Highway 86S is a semi-limited access expressway and an intra-regional arterial highway providing indirect but important access to the eastern portion of the planning area. Highway 86S is a northwest-southeast trending expressway designated as a “Freeway” in the County of Riverside General Plan, with a variable right-of-way. In the vicinity of the planning area, Highway 86S has been improved as a four-lane high volume roadway with a wide median island and with slip and turn lanes at major surface crossroads. Existing traffic volumes range from approximately 20,000 VPD north of Avenue 60 to approximately 12,900 VPD south of Avenue 62. Due to high future volumes, the current at-grade intersection of SR-86 and Avenue 62 has been planned for expansion to provide a grade-separated facility utilizing a partial cloverleaf design.

U.S. Interstate-10

US Interstate-10 is currently built as a six to eight-lane divided freeway accessed from both loop and diamond interchanges spaced a minimum of one mile apart. I-10 provides essential inter-city and inter-regional access, and is also a critical part of the local road network moving people and goods into and out of the Valley. Direct City access to I-10 is currently provided through interchanges with Washington Street and Jefferson.

Local Major Roadways

The City has developed and maintains an extensive arterial roadway network, which, in addition to the regional facilities serving the community, also serves both local and inter-city traffic. The City road network has been built essentially along a north-south grid, with interconnections with major arterials passing through adjacent jurisdictions. The location of trip attractors along these roads or the convenience they provide in traversing the City varies with each road.

Washington Street

Washington Street, oriented in a north-south direction, has a variable roadway with and consists of three lanes in each direction through the majority of the planning area. It is currently classified as a Major Arterial. Current traffic volumes range from approximately 23,434 to 40,633 VPD. Washington Street provides access to State Highway 111 and to Interstate 10 (I- 10) north of the city limits. Intersections with Washington Street are currently operating at Level of Service (LOS) C or better, with the exception of its intersection with Highway 111 (LOS D in 2010). Mid-block segments operate at LOS C or better. Bicycles are accommodated and Sunline bus service is also available on the fully improved segments of this roadway.

Eisenhower Drive

Eisenhower Drive is oriented in an east-west direction at Washington Street, and transitions to a north-south roadway at Avenue 50. Eisenhower Drive consists of two lanes in each direction and is classified as a Primary Arterial. Current traffic volumes range from 10,000 to 12,000 VPD. Intersections with Eisenhower Drive are operating at LOS C or better and mid-block segments operate at LOS A. Bicycles and golf carts are accommodated on the fully improved segments of this roadway.

Avenida Bermudas

Avenida Bermudas is oriented in a north-south direction and consists of two lanes in each direction, extending from Calle Tampico on the north to the top and along the east side of the cove on the south. This roadway is classified as a Secondary Arterial with traffic volumes ranging from 3,400 to 9,200 VPD. Avenida Bermudas provides a variable paved section ranging from four lanes in the Village area to two lanes near the top of the cove. Bicycles and buses are accommodated on the fully improved segments of this roadway.

Adams Street

Adams Street is oriented in a north-south direction and consists of two lanes in each direction. It is classified as a Secondary Arterial and has been built as a Primary Arterial between Highway 111 and Avenue 48, with traffic volumes ranging from 12,000 to 14,000 VPD. Its intersections all currently operate at LOS C and mid-block segments operate at LOS A. Bicycles and buses are accommodated on the fully improved segments of this roadway. A bridge to carry Adams Street over the Coachella Valley Stormwater Channel (Whitewater River) is expected to be completed in 2013.

Dune Palms Road

Dune Palms Road is oriented in a north-south direction and consists of two lanes in each direction between Fred Waring Drive and Westward Ho Drive, one lane in each direction between Westward Ho Drive and Highway 111, and two lanes in each direction between Highway 111 and Avenue 48. Dune Palms Road is classified as a Secondary Arterial. Current traffic volumes range from 10,000 to 12,000 VPD. Intersections with Dune Palms Road are operating at LOS C and mid-block segments operate at LOS A. Bicycles are accommodated on the fully improved segments of this roadway. There is an at-grade crossing of the Whitewater River with long-term plans for at least a low-flow crossing at this location.

Jefferson Street

Jefferson Street is oriented in a north-south direction and consists of three lanes in each direction. It is classified as a Major Arterial north of Avenue 54 and as a Modified Secondary Arterial between Avenue 58 and Avenue 62. Jefferson Street provides access to State Highway 111, southern parts of the City and to Interstate 10 (I-10) north of city limits. Current traffic volumes range from 12,000 to 27,000 VPD. Intersections with Jefferson Street are operating at LOS C or better; the roundabout at Avenue 52 is operating at LOS A. Mid-block segments operate at LOS A. Bicycles are accommodated on the fully improved segments of this roadway.

Madison Street

Madison Street is oriented in a north-south direction and consists of one lane in each direction between Avenue 50 and Avenue 54 and two lanes in each direction between Avenue 54 and Avenue 60. Madison Street is classified as a Primary Arterial between Avenue 50 and Avenue 58, as a Secondary Arterial between Avenue 58 and Avenue 60, and as a Modified Secondary Arterial between Avenue 60 and Avenue 62. Current traffic volumes range from 3,300 to 9,200 VPD. Most intersections with Madison Street are operating at LOS A or B, with its intersection with Avenue 50 operating at LOS C in the AM and LOS D in the PM peak hours. Mid-block segments operate at LOS A. Bicycles are accommodated on the fully improved segments of this roadway.

Monroe Street

Monroe Street is oriented in a north-south direction and consists of one lane in each direction. It is classified as a Primary Arterial between Avenue 52 and Avenue 60 and as a Secondary Arterial between Avenue 60 and Avenue 62. Monroe Street provides access to State Highway 111 and to Interstate-10 north of city limits. Current traffic volumes range from 2,500 to 3,100 VPD. Intersections with Monroe Street are operating at LOS B or better, with mid-block segments operating at LOS A. Bicycles are accommodated on the fully improved segments of this roadway.

Jackson Street

Jackson Street is oriented in a north-south direction and consists of one lane in each direction. It is classified as a Primary Arterial. Jackson Street is located in the City's Sphere and provides access to State Highway 111 and to Interstate-10 north of city limits. Current traffic volumes range from 1,700 to 3,300 VPD. In the planning area, intersections with Jackson Street are expected to operate at LOS B or better, with mid-block segments operating at a LOS A. Bicycles are accommodated on the fully improved segments of this roadway.

Van Buren Street

Van Buren Street is oriented in a north-south direction and consists of one lane in each direction. It is classified as a Primary Arterial between Avenue 52 and Avenue 60 and as a Secondary Arterial between Avenue 60 and Avenue 62. Van Buren Street is located in the City's Sphere. In the planning area, intersections with Jackson Street are expected to operate at LOS B or better, with mid-block segments operating at a LOS A. No alternative modes of travel are accommodated on the fully improved segments of this roadway.

Harrison Street

Harrison Street is oriented in a north-south direction and consists of one lane in each direction. It

is classified as a Major Arterial. Harrison Street is located in the City's Sphere. In the planning area, intersections with Jackson Street are expected to operate at LOS B or better, with mid-block segments operating at a LOS A. No alternative modes of travel are accommodated.

Fred Waring Drive

Fred Waring Drive (Avenue 44) is oriented in an east-west direction and consists of three lanes in each direction between Washington Street and Adams St and between Dune Palms Road and Jefferson Street. Between Adams Street and Dune Palms Road, Fred Waring Drive consists of two lanes in the eastbound direction and one lane in the westbound direction. Fred Waring Drive is classified as a Primary Arterial. Current traffic volumes are approximately 24,500 VPD. Intersections with Fred Waring Drive are operating at LOS C, with mid-block segments operating at LOS A. Bicycles are accommodated . on the fully improved segments of this roadway.

Miles Avenue

Miles Avenue is oriented in an east-west direction and consists of two lanes in each direction. It is classified as a Primary Arterial. Current traffic volumes between Washington Street and Adams Street are approximately 24,500 VPD. Intersections with Miles Avenue are currently operating at LOS C, with mid-block segments operating at LOS A. Bicycles and a bus route are accommodated on the fully improved segments of this roadway.

Avenue 48

Avenue 48, oriented in an east-west direction, consists of two lanes in each direction, and is classified as a Primary Arterial. Current traffic volumes between Washington Street and Madison Street range from 9,600 VPD east of Jefferson Street to about 18,400 VPD east of Dune Palms Road. Intersections with Avenue 48 are currently operating at LOS C, with mid-block segments operating at LOS A. Bicycles are accommodated along on the fully improved segments of this roadway.

Avenue 50

Avenue 50, oriented in an east-west direction, consists of two lanes in each direction, and is classified as a Primary Arterial. Current traffic volumes between Washington Street and Madison Street are average 9,800 VPD. Intersections with Avenue 48 are currently operating at LOS C, with the exception of the Avenue 50 intersection with Washington Street, which is operating at LOS D. Mid-block segments are operating at LOS A. Bicycles are accommodated along on the fully improved segments of this roadway.

Calle Tampico

Calle Tampico, oriented in an east-west direction, consists of two lanes in each direction, and is classified as a Primary Arterial west of Washington Street. East of Washington Street, Calle Tampico consists of one lane in each direction and is classified as a Collector Street. Current traffic volumes range from 5,300 VPD west of Avenida Bermudas and about 10,000 VPD west of Washington Street. Intersections with Avenue 48 are currently operating at LOS C, with the exception of the Avenue 50 intersection with Washington Street, which is operating at LOS D. Mid-block segments are operating at LOS A. Bicycles, golf carts and buses are accommodated along on the fully improved segments of this roadway.

Avenue 52

Avenue 52 is oriented in an east-west direction and consists of two lanes in each direction between Avenida Bermudas and Jefferson Street. Between Jefferson Street and Monroe Street, Avenue 52 consists of two eastbound lanes and one westbound lane. Between Monroe Street and Jackson Street, Avenue 52 consists of one eastbound lane and two westbound lanes. Avenue 52 is classified as a Primary Arterial throughout the City and the City's Sphere. Current traffic volumes range from 7,200 VPD west of Monroe Street to about 16,100 VPD west of Washington Street. Intersections with Avenue 52 are currently operating at LOS C or better, with the exception of the Avenue 52 intersection with Avenida Bermudas, which is operating at LOS D. Mid-block segments are operating at LOS A. Bicycles, golf carts and buses are accommodated along on the fully improved segments of this roadway.

Avenue 54

Avenue 54 is an east-west street consisting of two lanes in each direction between Jefferson Street to east of Monroe Street. East of Monroe Street, Avenue 54 is a variable roadway with two westbound lanes and one eastbound lane. East of Monroe Street, Jefferson Street provides one lane in each direction. Avenue 54 is classified as a Primary Arterial between Jefferson Street and Monroe Street and is classified as a Secondary roadway between Monroe Street and Van Buren Street. Current traffic volumes are 7,200 VPD between Jefferson and Madison Streets. Intersections with Avenue 52 are currently operating at LOS C or better, with the exception of the Avenue 52 intersection with Avenida Bermudas, which is operating at LOS D. Roadway segments are operating at LOS A. Bicycles, golf carts and buses are accommodated on the fully improved segments of this roadway.

Avenue 56 (Airport Boulevard)

Airport Boulevard or Avenue 56 is an east-west street extending east of Madison Street, and consisting of two lanes in each direction between Jefferson Street Monroe Street. East of Monroe Street, Avenue 56 is a two-lane roadway. Avenue 56 is classified as a Primary Arterial. Current traffic volumes are 1,900 VPD east of Madison Street. Intersections are currently operating at LOS C or better, with the exception of the Avenue 52 intersection with Avenida Bermudas, which is operating at LOS D. Roadway segments are operating at LOS A. Bicycles, golf carts and buses are accommodated on the fully improved segments of this roadway.

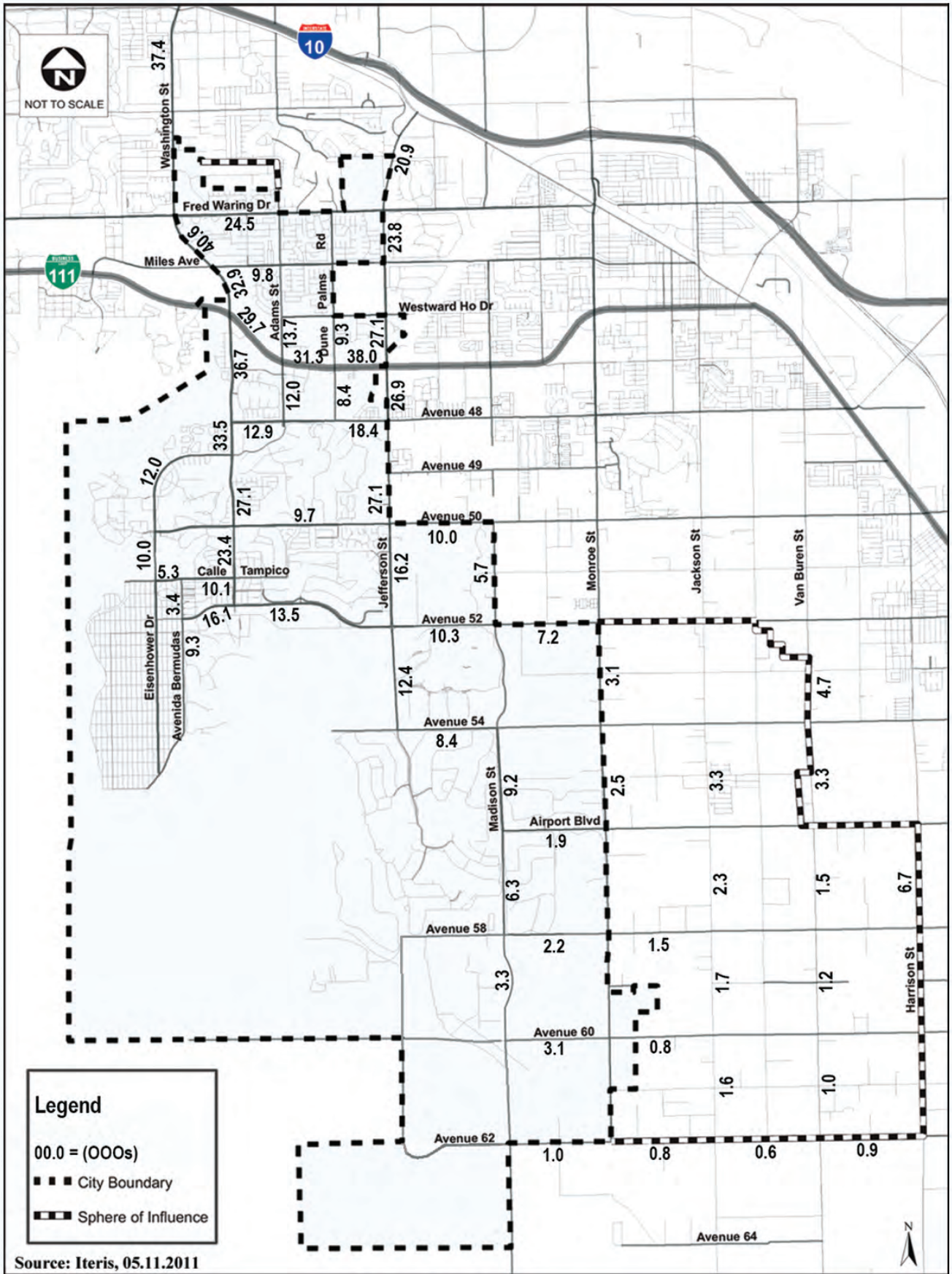
Avenue 60

Avenue 60 is an east-west street extending from the US Bureau of Reclamation Dike 4, eastward to the Coachella Valley Stormwater Channel. Local two lane segments also occur between the stormwater channel and the Highway 111/86S Expressway corridor, east of which it continues as a local street serving primarily agriculture. Avenue 60 is designated as a Secondary roadway from Madison Street on the west to Monroe Street, east of which it is classified as a Primary Arterial. Avenue 60 is currently improved as a two-lane roadway, except between Madison Street and Monroe Street where it provides one eastbound through lane, two westbound through lanes, median islands and turn lanes. Current traffic volumes are 3,000 VPD east of Madison Street and 1,500 east of Monroe Street. Bicycles are accommodated on the fully improved segments of this roadway.

Avenue 62

Much of the southern boundary of the General Plan planning area is east-west running Avenue 62, which is partially improved from USBR Dike No. 4 eastward to the east end of the Valley, crossing the stormwater channel, as well as Highway 111 and the 86S Expressway. Avenue 62 is classified as a Modified Secondary west of Monroe Street extended), and is classified a Secondary east of Monroe Street. Current traffic volumes are 1,000 VPD west of Monroe Street and ranging from 500 to 800 VPD east of Monroe Street. No alternative modes of travel are accommodated on this roadway.

The following exhibit shows the existing average daily traffic volumes on the major roadways in the General Plan study area.



06.26.12



TERRA NOVA®
Planning & Research, Inc.

City of La Quinta General Plan EIR
Existing (2010) Average Daily Traffic Volumes
La Quinta, California



Exhibit

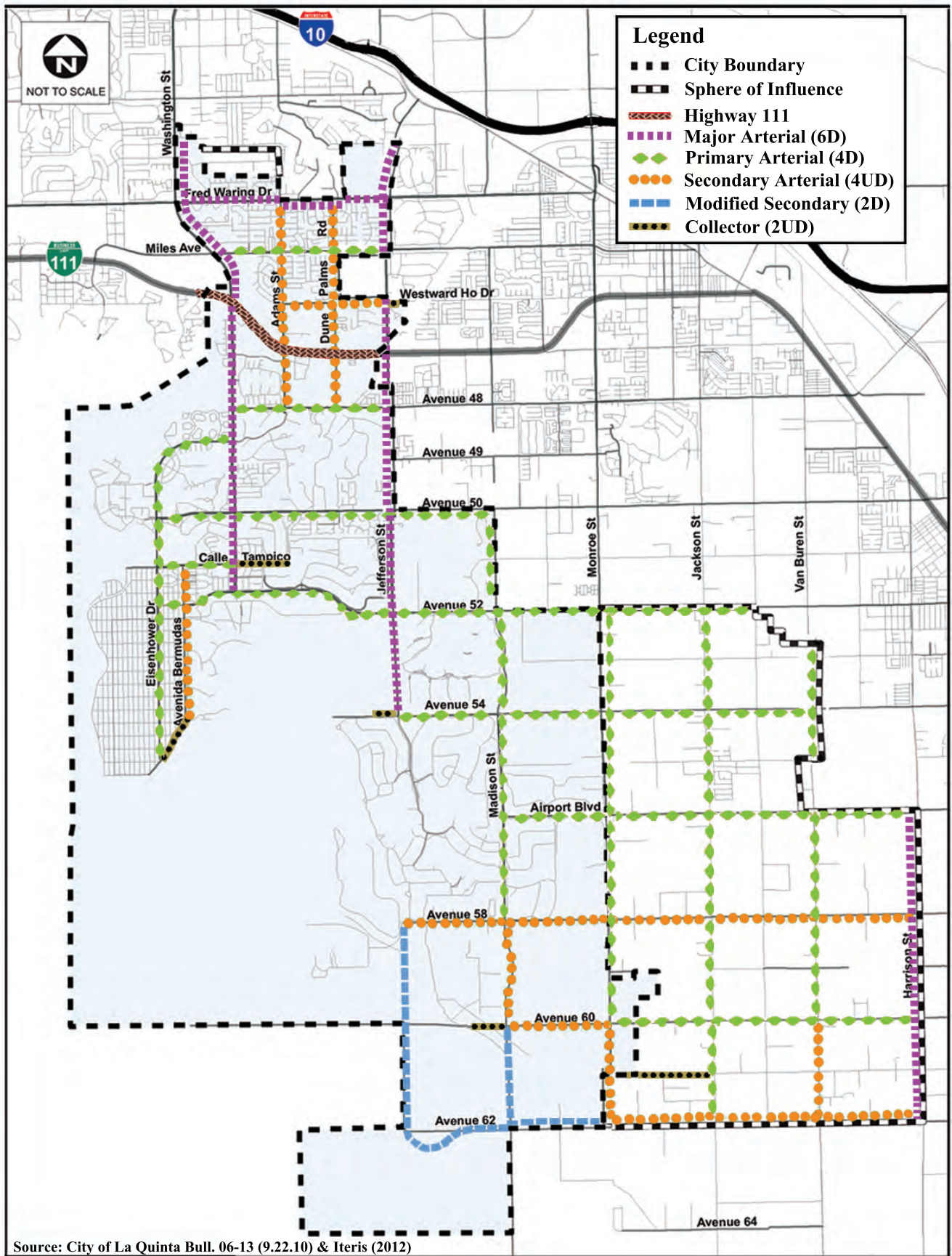
III-17

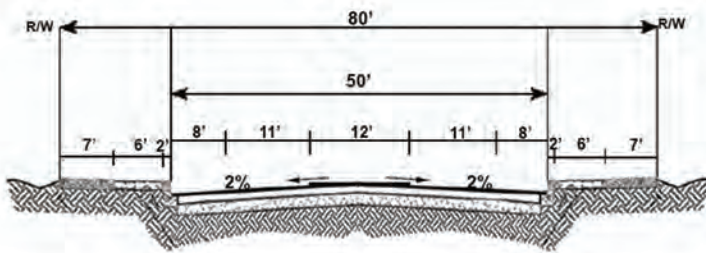
General Plan Roadway Classifications

Each major roadway in the planning area has been assigned a specific design classification based upon existing and projected traffic demands generated by build out of the General Plan. The need for and appropriateness of each classification has been based upon modeled future traffic volumes and overall community design goals set forth in the General Plan. Each of the classifications corresponds with the street cross sections illustrated in the General Plan Circulation Element. Certain refinements or adjustments may be required when securing right-of-way and constructing improvements at specific locations, and provisions for such adjustments are included in the Circulation Element.

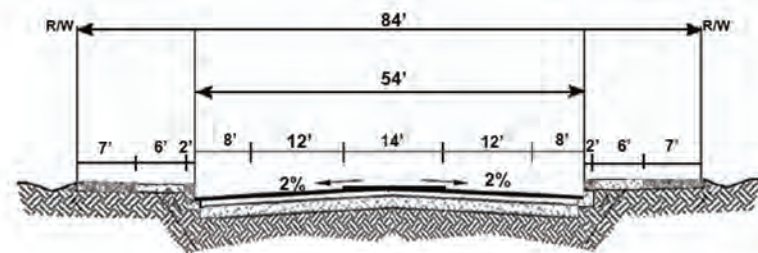
Existing Daily Traffic Volumes

As a direct result of the analysis conducted on existing traffic and roadway conditions, and on projections of future traffic resulting from General Plan build out, the roadway classification system has been developed and assigned to existing and future roads. This process has also taken into consideration special issues of concern and opportunities to enhance community circulation. **Table III-46** lists these General Plan roadways and also provides information on existing daily volumes, number of lanes, roadway capacity, volume to capacity (V/C) ratios, and LOS.

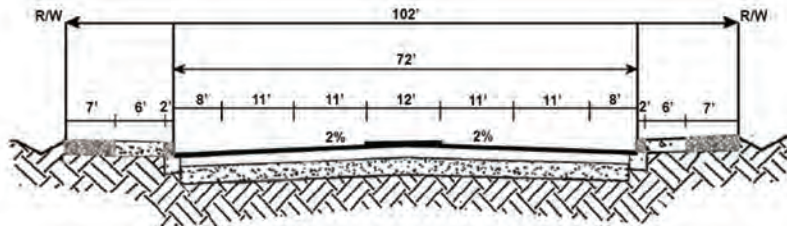




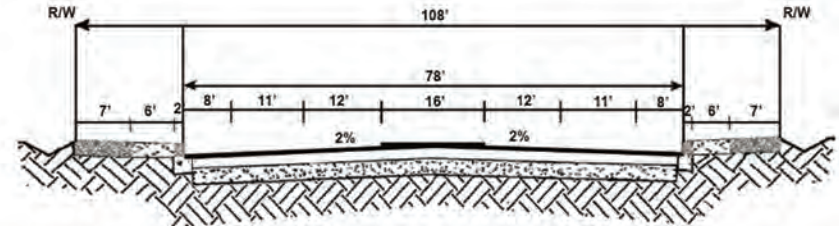
80' Collector



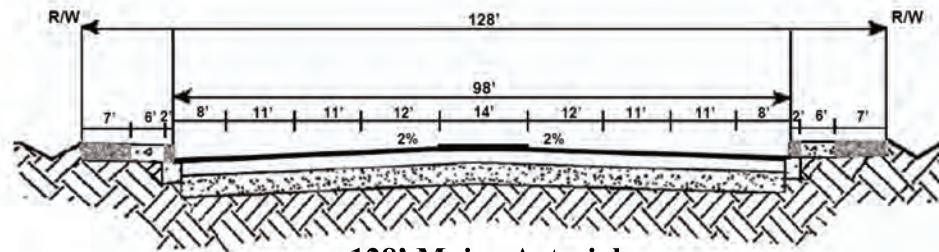
84' Modified Secondary Arterial



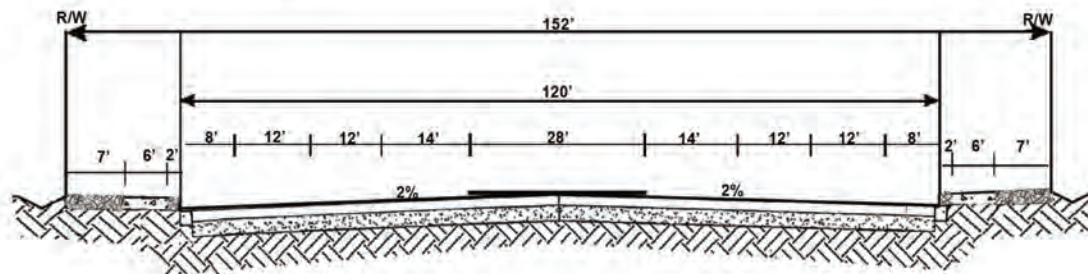
102' Secondary Arterial



108' Primary Arterial



128' Major Arterial



152' Highway 111

Table III-46
Existing Daily Volumes and Capacity Summary
General Plan Study Area

Roadway Link	Existing ADT	Roadway Designation	Existing Number of Lanes	Existing Capacity	Existing V/C Ratio - LOS
Washington St					
Ave 42 to Fred Waring Dr	37,426	Major	6	59,300	0.63 – B
Fred Waring Dr to Miles Ave	40,633	Major	6	59,300	0.69 – B
Miles Ave to Hwy 111	32,915	Major	6	59,300	0.56 – A
Hwy 111 to Ave 48	36,710	Major	6	59,300	0.62 – B
Ave 48 to Eisenhower Dr	33,465	Major	6	59,300	0.56 – A
Eisenhower Dr to 600' north of Ave 50	27,129	Major	6	59,300	0.46 – A
600' north of Ave 50 to Ave 50	27,129	Major	5	47,500*	0.57 – A
Ave 50 to Calle Tampico	23,434	Major	6	59,300	0.40 – A
Eisenhower Dr					
Washington St to Ave 50	12,013 ¹	Primary	4	41,400	0.29 – A
Avenue 50 to Calle Tampico	9,975 ¹	Primary	4	41,400	0.24 – A
Avenida Bermudas					
Calle Tampico to Ave 52	3,388 ¹	Secondary	4	28,000	0.12 – A
Ave 52 to Calle Durango	9,275 ¹	Secondary	4	28,000	0.33 – A
Adams St					
Westward Ho Dr to Hwy 111	13,724	Secondary	4	41,400	0.33 – A
Hwy 111 to Ave 48	12,035	Secondary	4	41,400	0.29 – A
Dune Palms Rd					
Westward Ho Dr to Hwy 111	9,282	Secondary	2	19,000	0.49 – A
Hwy 111 to Ave 48	8,373	Secondary	4	41,400	0.20 – A
Jefferson St					
Country Club Rd to Fred Waring Dr	20,913	Major	6	59,300	0.35 – A
Fred Waring Dr to Miles Ave	23,764	Major	6	59,300	0.40 – A
Westward Ho Dr to Hwy 111	27,112	Major	6	59,300	0.46 – A
Hwy 111 to Ave 48	26,889	Major	6	59,300	0.45 – A
Ave 48 to Ave 50	27,133	Major	6	59,300	0.46 – A
Ave 50 to Ave 52	16,169	Major	6	59,300	0.27 – A
Ave 52 to Ave 54	12,399	Major	6	59,300	0.21 – A
Madison St					
Ave 50 to Ave 52	5,664	Primary	2	14,000	0.40 – A
Ave 54 to Airport Blvd	9,219	Primary	4	41,400	0.22 – A
Airport Blvd to Ave 58	6,348	Primary	4	41,400	0.15 – A
Ave 58 to Ave 60	3,341	Secondary	4	41,400	0.08 – A

Table III-46
Existing Daily Volumes and Capacity Summary
General Plan Study Area

Roadway Link	Existing ADT	Roadway Designation	Existing Number of Lanes	Existing Capacity	Existing V/C Ratio - LOS
Monroe St					
Ave 52 to Ave 54	3,147	Primary	2	14,000	0.22 – A
Ave 54 to Airport Blvd	2,532	Primary	2	14,000	0.18 – A
Jackson St					
Ave 54 to Airport Blvd	3,338	Primary	2	14,000	0.24 – A
Airport Blvd to Ave 58	2,326	Primary	2	14,000	0.17 – A
Ave 58 to Ave 60	1,734	Primary	2	14,000	0.12 – A
Ave 60 to Ave 62	1,569	Primary	2	14,000	0.11 – A
Van Buren St					
Ave 52 to Ave 54	4,663	Primary	2	14,000	0.33 – A
Ave 54 to Airport Blvd	3,346	Primary	2	14,000	0.24 – A
Airport Blvd to Ave 58	1,472	Primary	2	14,000	0.11 – A
Ave 58 to Ave 60	1,176	Primary	2	14,000	0.08 – A
Ave 60 to Ave 62	1,017	Secondary	2	14,000	0.07 – A
Harrison St					
Airport Blvd to Ave 58	6,690	Major	2	14,000	0.48 – A
Fred Waring Dr (Ave 44)					
Washington St to Adams St	24,492	Primary	6	59,300	0.41 – A
Miles Ave					
Washington St to Adams St	9,828	Primary	4	41,400	0.24 – A
Hwy 111					
Washington St to Adams St	29,726	Major	6	59,300	0.50 – A
Adams St to Dune Palms Rd	31,348	Major	6	59,300	0.53 – A
Dune Palms Rd to Jefferson St	38,037	Major	6	59,300	0.64 – B
Ave 48					
Washington St to Adams St	12,903	Primary	4	41,400	0.31 – A
Dune Palms Rd to Jefferson St	18,364	Primary	4	41,400	0.44 – A
Ave 50					
Washington St to Jefferson St	9,663	Primary	4	41,400	0.23 – A
Jefferson St to Madison St	9,990	Primary	4	41,400	0.24 – A
Calle Tampico					
Eisenhower Dr to Avenida Bermudas	5,350 ¹	Primary		41,400	0.13 – A
Avenida Bermudas to Washington St	10,063 ¹	Primary		41,400	0.24 – A
Ave 52					
Avenida Bermudas to Washington St	16,133	Primary	4	41,400	0.39 – A
Washington St to Jefferson St	13,529	Primary	4	41,400	0.33 – A
Jefferson St to Madison St	10,306	Primary	2	19,000	0.54 – A

Table III-46
Existing Daily Volumes and Capacity Summary
General Plan Study Area

Roadway Link	Existing ADT	Roadway Designation	Existing Number of Lanes	Existing Capacity	Existing V/C Ratio - LOS
Madison St to Monroe St	7,238	Primary	2	19,000	0.38 – A
Ave 54					
Jefferson St to Madison St	8,386	Primary	4	41,400	0.20 – A
Airport Blvd					
Madison St to Monroe St	1,893	Primary	4	41,400	0.05 – A
Ave 58					
Madison St to Monroe St	2,188	Secondary	4	41,400	0.05 – A
Monroe St to Jackson St	1,554	Secondary	2	14,000	0.11 – A
Ave 60					
Madison St to Monroe St	3,067	Secondary	2	19,000	0.16 – A
Monroe St to Jackson St	855	Primary	2	14,000	0.06 – A
Ave 62					
Madison St to Monroe St	1,025 ¹	Modified Collector	2	14,000	0.07 – A
Monroe St to Jackson St	804	Secondary	2	14,000	0.06 – A
Jackson St to Van Buren St	557	Secondary	2	14,000	0.04 – A
Van Buren St to Harrison St	866	Secondary	2	14,000	0.06 – A

As shown in the above table, the roadway segments analyzed are currently operating at LOS A, with the exception of three segments of Washington Street and one segment of Highway 111 that are operating at LOS B. Clearly, all analyzed roadway segments are currently operating well within the acceptable levels of service.

Existing Operating Conditions at Major Intersection

As noted above, a total of thirty-seven (37) intersections were analyzed as part of the General Plan update. As with the analysis of existing conditions for various roadway segments, the intersection analysis also evaluated intersection volumes and levels of service for the peak season period. The following **Table III-47** sets forth this information.

Table III-47
Existing Peak Hour Intersection LOS
Peak Season

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		LOS	Delay (Sec)	LOS	Delay (Sec)
1. Washington St & Fred Waring Dr	Signal	C	34.9	C	34.1
2. Washington St & Miles Ave	Signal	C	29.2	C	28.0
3. Washington St & Channel Dr	Signal	B	18.2	C	25.3
4. Washington St & Hwy 111	Signal	D	35.3	D	42.3
5. Washington St & Ave 48	Signal	C	32.3	C	25.1
6. Washington St & Eisenhower Dr	Signal	C	23.7	C	20.7
7. Washington St & Ave 50	Signal	C	30.3	C	25.6
8. Washington St & Calle Tampico	Signal	C	24.7	C	25.4
9. Washington St & Ave 52	Signal	C	20.6	C	23.9
10. Eisenhower Dr & Calle Tampico	Signal	C	24.1	C	27.2
11. Avenida Bermudas & Ave 52	Signal	D	38.6	C	26.3
12. Adams St & Fred Waring Dr	Signal	C	34.6	C	28.8
13. Adams St & Miles Ave	Signal	C	31.4	C	30.8
14. Adams St & Hwy 111	Signal	C	29.0	C	28.7
15. Adams St & Ave 48	Signal	C	29.6	C	27.7
16. Dune Palms Rd & Fred Waring Dr	Signal	C	25.4	C	20.2
17. Dune Palms Rd & Miles Ave	Signal	C	31.9	C	31.0
18. Dune Palms Rd & Westward Ho Dr	Signal	C	30.8	C	31.4
19. Dune Palms Rd & Hwy 111	Signal	C	30.3	C	26.6
20. Dune Palms Rd & Ave 48	Signal	C	24.1	C	25.9
21. Jefferson St & Fred Waring Dr	Signal	C	31.2	C	30.6
22. Jefferson St & Hwy 111	Signal	C	30.3	C	30.8
23. Jefferson St & Ave 48	Signal	C	32.5	C	31.4
24. Jefferson St & Ave 49	Signal	C	23.9	C	20.1
25. Jefferson St & Ave 50	Signal	C	32.7	C	32.6
26. Jefferson St & Ave 52	Roundabout	A	7.5	A	7.0
27. Jefferson St & Ave 54	AWSC	B	11.6	B	11.6
28. Madison St & Ave 50	AWSC	C	17.1	D	32.4
29. Madison St & Ave 52	AWSC	B	12.1	B	13.0
30. Madison St & Ave 54	AWSC	B	10.8	B	11.5
31. Madison St & Ave 58	AWSC	A	8.4	A	9.1
32. Madison St & Ave 60	AWSC	A	8.0	A	9.1
33. Monroe St & Ave 52	AWSC	B	13.8	B	14.4
34. Monroe St & Ave 54	AWSC	B	10.2	B	10.6
35. Monroe St & Ave 58	AWSC	A	7.7	A	8.5
36. Monroe St & Ave 60	AWSC	A	7.9	A	8.1
37. Monroe St & Ave 62	AWSC	A	7.5	A	7.4

During the peak season, and as shown in the above table, all but four of the 37 study intersections operate at LOS C or better. The intersection of Washington Street/Highway 111 operates at LOS D, very near LOS C, during the a.m. peak hour. During the p.m. peak hour, this intersection operates at a slightly worse delay during peak season conditions, but remains at LOS D. The intersection of Avenida Bermudas/Avenue 52 operates at LOS D and very near LOS C, during the a.m. peak hour. The intersection of Madison Street/Avenue 50 operates at LOS D during only the p.m. peak hour. This intersection is all-way stop-controlled, therefore LOS ranges are smaller than those applied to signalized intersections. All study intersections are operating at acceptable levels of service (LOS D or better).

All-Weather Access

Major drainages that affect roadway access both within the City and the planning area include the Whitewater River (aka Coachella Valley Stormwater Channel east of Washington Street) and the La Quinta Evacuation Channel. The Whitewater River is the principal drainage affecting all-weather access in the City. Current all-weather crossings exist on Washington Street, Eisenhower Drive, Adams Street and Jefferson Street. Dune Palms Drive is currently a low-flow crossing. Future all-weather crossings are also planned for the southern extensions of Jefferson Street over the Dike 2 flood protective levee and Madison Street over the Dike 4 levee. All-weather access and roadway capacity are also affected by stormwater runoff, which is frequently conveyed by local streets into dedicated surface and sub-surface stormwater facilities. Areas of inadequate drainage can result in on-road ponding, unsafe conditions, and reduced accessibility and capacity.

SunLine Transit Agency and Public Transportation

The provider of public transit service within La Quinta and the Coachella Valley is the SunLine Transit Agency. In addition to SunLine's fleet of new buses powered by compressed natural gas and other clean-burning fuels, SunLine is also integrating other innovative technologies and fuels into the local public transit system. In 2002 SunLine introduced a bus powered entirely by zero-emission fuel cell technology.

Local and Supplemental Bus Service

The City and Sphere of Influence are directly served by two bus routes, Line 111 and Line 70. Line 111 runs along Highway 111 from Indio to Palm Springs and is a main trunk line in the SunLine system. Line 70 extends from the south end of the La Quinta Cove, north to and east along Avenue 47, then north along Adams Street where it turns west to Washington Street and north to Country Club Drive.

The *SunDial* is a Valley-wide, ADA-compliant service providing curb-to-curb next day service that is wheelchair accessible. Sunline is putting into service a new "Riverside Commuter Express Route 210" service that will run between Palm Desert and Riverside. This service will be an expansion of existing the RTA CommuterLink Route 210 service between Banning and Riverside, with local stops to include Thousand Palms/I-10 area, Cabazon and other communities to the west.

Air Transportation

La Quinta and the Coachella Valley region are served by three airports, each of which is briefly described below:

Palm Springs International Airport

Palm Springs International Airport is located west of Gene Autry Trail and north of Ramon Road in the City of Palm Springs, and is the primary air transportation link for the Coachella Valley. The airport is classified in the National Plan of Integrated Airport Systems (NPIAS) as a long-haul commercial service airport. It is capable of supporting non-stop commercial service to destinations over 1,500 miles and is classified as a small hub air passenger airport based upon the percentage of national airline enplanements it supports. Airport enplanements are projected to reach approximately 809,256 by the year 2015

Jacqueline Cochran Regional Airport

The Jacqueline Cochran Regional Airport is located immediately east of the City's Sphere of influence, on the east side of Harrison Street, between Avenue 56 (Airport Boulevard) and Avenue 62. Annual aircraft operations at Jacqueline Cochran Regional Airport were estimated at 65,000 in 2002, none of which were of a commercial nature. The airport's master plan projects this activity to reach some 110,000 operations by 2022 and to continue to grow along with the urbanization of the Coachella Valley. While commercial passenger services are anticipated there is no projected date when these might be offered.

Bermuda Dunes Airport

Bermuda Dunes Airport is a General Aviation Airport located on 100± acres adjacent and parallel to the Union Pacific Railroad/ Interstate-10 corridor, approximately three miles north of the City limits. The airport is bounded on the north by Country Club Drive, on the south by Avenue 42, on the west by Adams Street and on the east by Jefferson Street. A total of approximately 25,332 operations occur each year at this airport, of which about 6.6% are business jets. The expansion of facilities at this airport is essentially precluded by surrounding development. Annual maximum capacity is estimated at 75,000 operations per year.

Railway Facilities

Rail lines of the Union Pacific Railroad (UPRR) are located north and east of the La Quinta planning area. Rail freight service is provided to the Coachella Valley by the Union Pacific Railroad, with freight transfer facilities located in Indio and Coachella. There is also Amtrak service to Indio and Palm Springs. These rail facilities carry approximately 40 trains per day, almost all of which are freight. The County and local jurisdictions are exploring possible future access to Union Pacific Rail lines for future passenger and freight service access.

2. Project Impacts

The consequences of General Plan build out, and within the context of continued development outside the planning area, have been evaluated for the 63 major roadway segments and 37 intersections that have been analysed. Based on this analysis, the proposed General Plan Land Use Plan is projected to generate a total of approximately 635,905 average daily trips. Of these,

449,489 ADT would be generated within the City's corporate limits and 186,416 would be generated in the City Sphere-of-Influence (Sphere).

Within the City's corporate limits, the proposed Land Use Plan will generate about 3.6% more traffic than build out of the 2002 General Plan. Within the City's Sphere, the proposed Land Use Plan will generate about 34% more traffic than build out of the 2002 General Plan land use designations in the Sphere. The following discussion and tables detail the impacts associated with implementation and build out of the Preferred Alternative land use plan.

Roadway Segment Impact Analysis

As noted, for traffic analysis purposes General Plan build out is projected for the Year 2035. The following **Table III-48** identifies each roadways segment, projected 2035 ADT volumes, the roadway designation/classification, the number of through lanes required based on the roadway classification, future roadway capacity and volume to capacity ratios and level of service projected in 2035.

Table III-48
General Plan Build Out (2035) Roadway Segment Analysis
(Peak Season)

Roadway Link	2035 ADT	Roadway Designation	2035 Number of Lanes	2035 Capacity	2035 V/C Ratio - LOS
Washington St					
Ave 42 to Fred Waring Dr	58,241	Major	6	61,100	0.95 – E
Fred Waring Dr to Miles Ave	64,210	Major	6	61,100	1.05 – F
Miles Ave to Hwy 111	54,141	Major	6	61,100	0.89 – D
Hwy 111 to Ave 48	57,955	Major	6	61,100	0.95 – E
Ave 48 to Eisenhower Dr	58,267	Major	6	61,100	0.95 – E
Eisenhower Dr to Ave 50	41,381	Major	6	61,100	0.68 – B
Ave 50 to Calle Tampico	36,164	Major	6	61,100	0.59 – A
Eisenhower Dr					
Washington St to Ave 50	21,435	Primary	4	42,600	0.50 – A
Avenue 50 to Calle Tampico	15,291	Primary	4	42,600	0.36 – A
Avenida Bermudas					
Calle Tampico to Ave 52	3,919	Secondary	4	28,000	0.14 – A
Ave 52 to Calle Durango	10,836	Secondary	4	28,000	0.39 – A
Adams St					
Westward Ho Dr to Hwy 111	21,347	Secondary	4	42,600	0.50 – A
Hwy 111 to Ave 48	22,132	Secondary	4	42,600	0.52 – A
Dune Palms Rd					
Westward Ho Dr to Hwy 111	16,547	Secondary	4	28,000	0.59 – A
Hwy 111 to Ave 48	20,999	Secondary	4	28,000	0.75 – C

Table III-48
General Plan Build Out (2035) Roadway Segment Analysis
(Peak Season)

Roadway Link	2035 ADT	Roadway Designation	2035 Number of Lanes	2035 Capacity	2035 V/C Ratio - LOS
Jefferson St					
Country Club Rd to Fred Waring Dr	34,274	Major	6	61,100	0.56 – A
Fred Waring Dr to Miles Ave	44,436	Major	6	61,100	0.73 – C
Westward Ho Dr to Hwy 111	48,090	Major	6	61,100	0.79 – C
Hwy 111 to Ave 48	46,656	Major	6	61,100	0.76 – C
Ave 48 to Ave 50	53,649	Major	6	61,100	0.88 – D
Ave 50 to Ave 52	35,143	Major	6	61,100	0.58 – A
Ave 52 to Ave 54	31,532	Major	6	61,100	0.52 – A
Madison St					
Ave 50 to Ave 52	34,204	Primary	4	42,600	0.80 – C
Ave 54 to Airport Blvd	47,529	Primary	4	42,600	1.12 – F
Airport Blvd to Ave 58	35,638	Primary	4	42,600	0.84 – D
Ave 58 to Ave 60	26,920	Secondary	4	42,600	0.63 – B
Monroe St					
Ave 52 to Ave 54	32,749	Primary	4	42,600	0.77 – C
Ave 54 to Airport Blvd	34,453	Primary	4	42,600	0.81 – D
Jackson St					
Ave 54 to Airport Blvd	28,524	Primary	4	42,600	0.67 – B
Airport Blvd to Ave 58	28,380	Primary	4	42,600	0.67 – B
Ave 58 to Ave 60	23,174	Primary	4	42,600	0.54 – A
Ave 60 to Ave 62	16,826	Primary	4	42,600	0.39 – A
Van Buren St					
Ave 52 to Ave 54	28,531	Primary	4	42,600	0.67 – B
Ave 54 to Airport Blvd	22,172	Primary	4	42,600	0.52 – A
Airport Blvd to Ave 58	21,641	Primary	4	42,600	0.51 – A
Ave 58 to Ave 60	20,134	Primary	4	42,600	0.47 – A
Ave 60 to Ave 62	11,627	Secondary	4	28,000	0.42 – A
Harrison St					
Airport Blvd to Ave 58	79,828	Augmented Major	8	76,000	1.05 – F
Fred Waring Dr (Ave 44)					
Washington St to Adams St	52,881	Primary	6	61,100	0.87 – D
Miles Ave					
Washington St to Adams St	15,151	Primary	4	42,600	0.36 – A
Hwy 111					
Washington St to Adams St	53,511	Major	6	61,100	0.88 – D

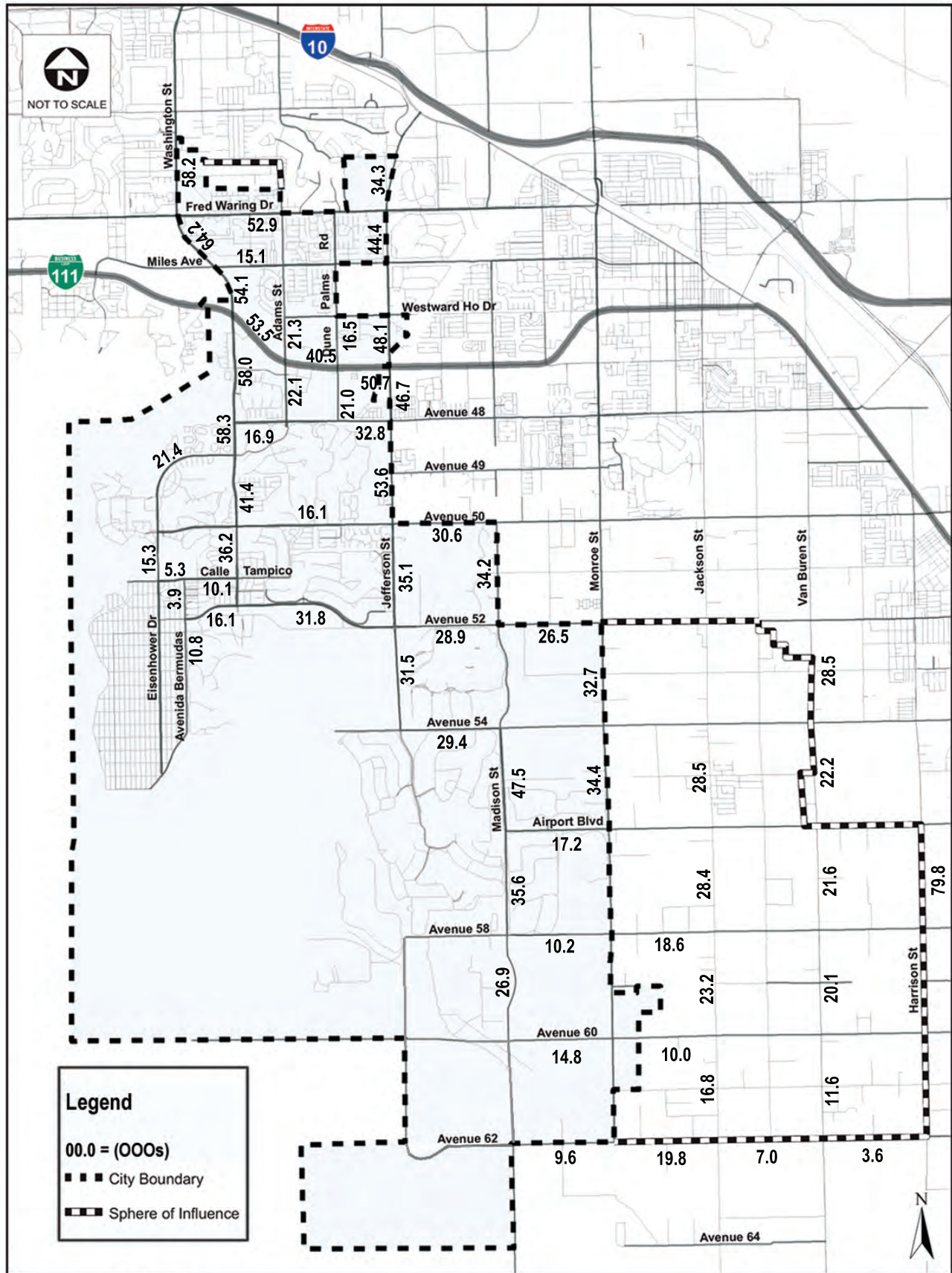
Table III-48
General Plan Build Out (2035) Roadway Segment Analysis
(Peak Season)

Roadway Link	2035 ADT	Roadway Designation	2035 Number of Lanes	2035 Capacity	2035 V/C Ratio - LOS
Adams St to Dune Palms Rd	40,481	Major	6	61,100	0.66 – B
Dune Palms Rd to Jefferson St	50,659	Major	6	61,100	0.83 – D
Ave 48					
Washington St to Adams St	16,902	Primary	4	42,600	0.40 – A
Dune Palms Rd to Jefferson St	32,855	Primary	4	42,600	0.77 – C
Ave 50					
Washington St to Jefferson St	16,121	Primary	4	42,600	0.38 – A
Jefferson St to Madison St	30,593	Primary	4	42,600	0.72 – C
Calle Tampico					
Eisenhower Dr to Avenida Bermudas	5,350	Primary	4	42,600	0.13 – A
Avenida Bermudas to Washington St	10,063	Primary	4	42,600	0.24 – A
Ave 52					
Avenida Bermudas to Washington St	16,133	Primary	4	42,600	0.38 – A
Washington St to Jefferson St	31,770	Primary	4	42,600	0.75 – C
Jefferson St to Madison St	28,944	Primary	4	42,600	0.68 – B
Madison St to Monroe St	26,510	Primary	4	42,600	0.62 – B
Ave 54					
Jefferson St to Madison St	29,390	Primary	4	42,600	0.69 – C
Airport Blvd					
Madison St to Monroe St	17,177	Primary	4	42,600	0.40 – A
Ave 58					
Madison St to Monroe St	10,199	Secondary	4	28,000	0.36 – A
Monroe St to Jackson St	18,633	Secondary	2	28,000	0.67 – B
Ave 60					
Madison St to Monroe St	14,846	Secondary	4	28,000	0.53 – A
Monroe St to Jackson St	9,960	Primary	4	42,600	0.23 – A
Ave 62					
Madison St to Monroe St	9,624	Modified Collector	4	28,000	0.34 – A
Monroe St to Jackson St	19,822	Secondary	4	28,000	0.71 – C
Jackson St to Van Buren St	7,022	Secondary	4	28,000	0.25 – A
Van Buren St to Harrison St	3,631	Secondary	4	28,000	0.13 – A

Table III-48, above, indicates that the majority of the roadway segments are forecast to operate at acceptable levels of service (V/C ratios less than or equal to 0.90 or LOS D or better), the six roadway segments identified below are forecast to operate at an unacceptable LOS (V/C greater than 0.90) based on assigned roadway classifications. Three segments are projected to operate at

LOS E and three at LOS F at 2035 build out.

- Washington Street segments between Avenue 42 and Miles Avenue and between Highway 111 and Eisenhower Drive (6-lane Major Arterial) are forecast to exceed theoretical maximum carrying capacity by up to 3,000 VPD with the most problematic segment between Fred Waring Drive and Miles Avenue. LOS D service volumes are exceeded by over 9,000 VPD.
- Madison Street between Avenue 54 and Airport Boulevard (4-lane Primary Arterial) is forecast to exceed theoretical maximum carrying capacity by approximately 4,900 VPD. LOS D service volumes are exceeded by over 9,000 VPD.
- Harrison Street between Airport Boulevard and Avenue 58 (8-lane Augmented Major) is forecast to exceed theoretical maximum carrying capacity by approximately 3,800 VPD. Although the capacity of Harrison Street was assumed to be that of an Augmented Major Road (76,000 vehicles per day), it would likely operate as an Expressway due to limited accessibility compared to an Augmented Major Road, thus carrying a larger capacity. Prior study by the County raised the potential of grade-separated intersections to further enhance capacity.



Intersection Impact Analysis

A level of service analysis was conducted to evaluate forecast year 2035 operating conditions with implementation of the Preferred Land Use Plan intersection operations during the a.m. and p.m. peak hours. The projected levels of service reflect additional improvements (such as signalization of stop-controlled intersections and intersection widening), which were deemed feasible and are described in detail in the mitigation section of this discussion. **Table III-49**, below, sets forth 2035 operating conditions assuming all required improvements are provided.

Table III-49
General Plan Build out (2035) Intersection Analysis
(Peak Season)

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		LOS	Delay (Sec)	LOS	Delay (Sec)
1. Washington St & Fred Waring Dr	Signal	D	37.3	D	54.2
2. Washington St & Miles Ave	Signal	C	25.5	D	40.8
3. Washington St & Channel Dr	Signal	B	13.1	C	24.3
4. Washington St & Hwy 111	Signal	D	41.5	D	52.5
5. Washington St & Ave 48	Signal	D	38.9	D	46.9
6. Washington St & Eisenhower Dr ¹	Signal	C	28.3	C	31.4
7. Washington St & Ave 50	Signal	C	23.3	C	33.8
8. Washington St & Calle Tampico ²	Signal	C	20.4	C	24.2
9. Washington St & Ave 52	Signal	C	31.8	C	25.3
10. Eisenhower Dr & Calle Tampico	Signal	C	23.1	C	24.6
11. Avenida Bermudas & Ave 52	Signal	C	27.2	C	26.5
12. Adams St & Fred Waring Dr	Signal	C	31.9	D	37.0
13. Adams St & Miles Ave	Signal	C	34.7	D	46.6
14. Adams St & Hwy 111	Signal	C	32.8	D	35.8
15. Adams St & Ave 48	Signal	D	38.6	D	54.0
16. Dune Palms Rd & Fred Waring Dr	Signal	B	19.3	C	30.3
17. Dune Palms Rd & Miles Ave	Signal	D	36.3	D	50.8
18. Dune Palms Rd & Westward Ho Dr	Signal	C	32.5	D	43.5
19. Dune Palms Rd & Hwy 111	Signal	C	32.4	D	41.1
20. Dune Palms Rd & Ave 48	Signal	C	25.3	C	31.2
21. Jefferson St & Fred Waring Dr	Signal	D	36.9	D	44.9
22. Jefferson St & Hwy 111	Signal	C	32.1	D	53.8
23. Jefferson St & Ave 48	Signal	D	40.4	D	46.2
24. Jefferson St & Ave 49	Signal	B	17.7	B	16.9
25. Jefferson St & Ave 50	Signal	C	33.9	D	43.4
26. Jefferson St & Ave 52	Roundabout	A	3.0	A	3.4
27. Jefferson St & Ave 54	New Signal ³	B	15.3	B	15.4
28. Madison St & Ave 50	New Signal ³	D	38.2	D	51.4

Table III-49
General Plan Build out (2035) Intersection Analysis
(Peak Season)

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		LOS	Delay (Sec)	LOS	Delay (Sec)
29. Madison St & Ave 52	New Signal ³	D	39.8	D	54.5
30. Madison St & Ave 54	New Signal ³	D	38.2	D	52.7
31. Madison St & Ave 58	New Signal ³	C	24.7	D	52.6
32. Madison St & Ave 60	New Signal ³	D	51.8	D	38.7
33. Monroe St & Ave 52	New Signal ³	C	33.9	D	53.7
34. Monroe St & Ave 54	New Signal ³	C	30.2	D	44.8
35. Monroe St & Ave 58	New Signal ³	C	34.9	D	46.6
36. Monroe St & Ave 60	New Signal ³	C	30.7	D	43.3
37. Monroe St & Ave 62	New Signal ³	B	10.3	B	13.5

Notes:

LOS = Level of Service, Delay = Average Vehicle Delay (Seconds), V/C = Volume - to - Capacity Ratio.

1 = Calculation based on implementation of a second southbound right - turn lane (per 2011 CIP).

2 = Calculation based on implementation of a third eastbound left - turn lane (per 2011 CIP).

3 = 2035 Conditions assume signalization of existing lanes.

A thorough analysis has been made of the physical improvements that are required to assure that all the major intersections operate at acceptable levels of service (LOS D or better) in 2035. Of the 37 intersections analyzed, the following four are not expected to be able to accommodate all the required build out improvements and therefore have the potential to be operating at unacceptable levels of service by 2035 General Plan build out:

- Washington Street @ Fred Waring Drive;
- Adams Street @ Miles Avenue;
- Jefferson Street @ Highway 111;
- Madison Street @ Avenue 50.

It should also be noted that three of the four impacted intersections are shared between more than one jurisdiction. For instance, the Washington Street/Fred Waring Drive intersection is located within the corporate boundaries of the cities of La Quinta, Palm Desert and Indian Wells. In these cases, close and on-going coordination between cities will be necessary provide optimum

intersection improvements and to otherwise address forecast operational deficiencies.

All-Weather Access

The City's roadway network and the neighborhoods it serves are generally well protected from isolation due to flooding. Multiple points of access across the Whitewater River and the La Quinta Evacuation Channel and additional all-weather facilities are planned in conjunction with future development, which will preclude their isolation from flood events. Therefore, the implementation of the proposed general Plan will not have a significant adverse impact on limits of accessibility, including limits associated with flooding.

Public Transportation

Implementation of the proposed General Plan is expected to have a less than significant impact on public transit facilities in the Valley. The major corridors where bus service is currently provided are expected to continue to serve the areas of major demand for such services. The General Plan Circulation Element provides policies and programs that will facilitate continued coordination between the City and SunLine Transit to assure that the levels of transit service are maintained and, where necessary, expanded.

Air Transportation

The continuing build out of the La Quinta planning area and the Coachella Valley in general will contribute to increased demand for air transport services, particularly passenger service. In addition to substantial capacity at the Palm Springs International Airport, current and planned development at the Jacqueline Cochran Regional Airport will increase services at this airport. Implementation of the proposed General Plan is expected to have a less than significant impact on air transportation facilities in the Valley.

Railway Facilities

Union Pacific Railroad has recently expanded their rail facilities passing through the Valley and there are substantial rail siding and associated facilities adjacent to UPRR lines that are expected to meet future demand for several decades to come. Therefore, Implementation of the proposed General Plan is expected to have a less than significant impact on public transit facilities in the Valley.

3. Mitigation Measures

Mitigation Overview

The General Plan Circulation Element and the associated Traffic Impact Analysis identify and address potential roadway network inadequacies that could result in unacceptable levels of service. Areas of mitigation include roadway segment (mid-block) design, intersection design, as well as a wide range of system improvements, management strategies, and the implementation of a "Complete Streets" program, as set forth in the Circulation Element. How these mitigation

measures and strategies are applied to the City's roadway network and the efficacy are discussed below.

General Mitigation Measures and Strategies

In addition to standard mitigation involving physical street and intersection widening, a variety of largely non-physical improvements will be applied and include the development and implementation of transportation systems management and transportation demand management (TSM and TDM) strategies. Also available are Intelligent Transportation System strategies, which are primarily technologic add-on that can significantly enhance the operation of the City's transportation system. Each of these mitigation programs is described below and will be applied throughout the City

Transportation Demand Management

To the greatest extent practicable, the City will implement TDM strategies in both land use and transportation planning. TDM programs are designed to put more person trips into fewer vehicles, by increasing vehicle occupancy or car-pooling, vanpools, and transit ridership. TDM is also integral to integrated land management consistent with SB 375 and also includes planning efforts that increase the use of bicycling, golf carts and neighborhood electric vehicles (NEVs), as well as increased pedestrian modes of travel. The effectiveness of TDM strategies depends on their levels of application.

Transportation Systems Management

To the greatest extent practicable, the City will implement TSM strategies in transportation planning. TSM programs and projects are designed to support travelers with real time travel information so that they can make smart travel choices in selection of time, mode and routes of travel. TSM projects can also offer Intelligent Transportation Systems (ITS) projects for the most efficient traffic signal coordination and for informing motorists of routes around traffic congestion that may result from special events and traffic incidents. TSM programs are very effective when integrated into planned major events, such as scheduled music and art festivals, golf or tennis matches, and other special events that generate significant amounts of event traffic.

Roadway Segment Impact Mitigation

As noted in the impacts discussion, six roadway segments have been identified where the City may not be able to implement all the required physical improvements needed to assure LOS D or better operation in 2035. As noted in the Circulation Element and the General Plan Traffic Impact Analysis, getting all roadway segments to operate at LOS D or better in 2035 will require ongoing focus on well coordinated operations of traffic signals and access control along the segments to maximize efficient circulation. Roadway segment theoretical maximum carrying capacities, also called "service volumes," can be increased with delivery of more uniform travel speeds and less slowing and stopping at red lights.

The following mitigation strategies are recommended to further improve operating conditions along these segments.

Ongoing and diligent focus on well-coordinated operations of traffic signals will help maximize efficient circulation along these segments. Maximum roadway carrying capacities (or "service

volumes”) can be increased with more uniform travel speeds and less slowing and stopping at red lights. This is best accomplished with implementation of an Intelligent Transportation Systems master plan. The following recommendation should be implemented to increase roadway capacity without the addition of travel lanes along segments operating unacceptably:

1. Commit to ongoing funding and operations of intelligent transportation systems management, as described above, to:
 - a. Deliver traffic signal coordination along corridors in “real time” to optimize the progression of vehicles at the most efficient travel speeds;
 - b. Operate Transit Signal Priority at signals along major transit routes to optimize traffic flow;
 - c. Operate Dynamic Message Signs to route traffic around congestion/to available parking during peak periods and planned events.
2. Continue with the City’s established minimum driveway spacing and access restrictions;
3. Construct median islands with minimum opening spacing; and/or;
4. Add bus turnouts at bus stops along major transit routes.

The following segment-specific recommendations will further enhance operating efficiencies along these segments.

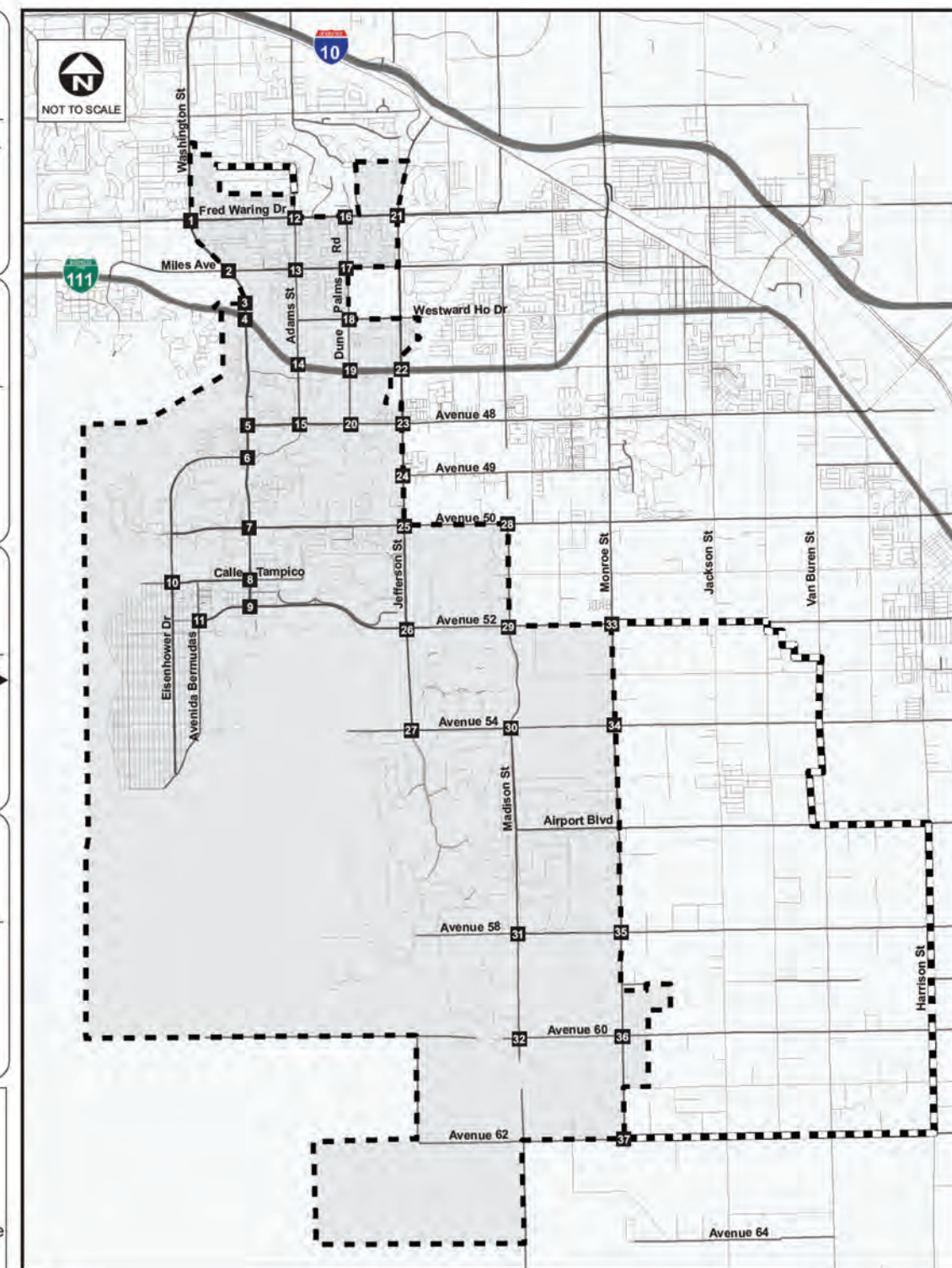
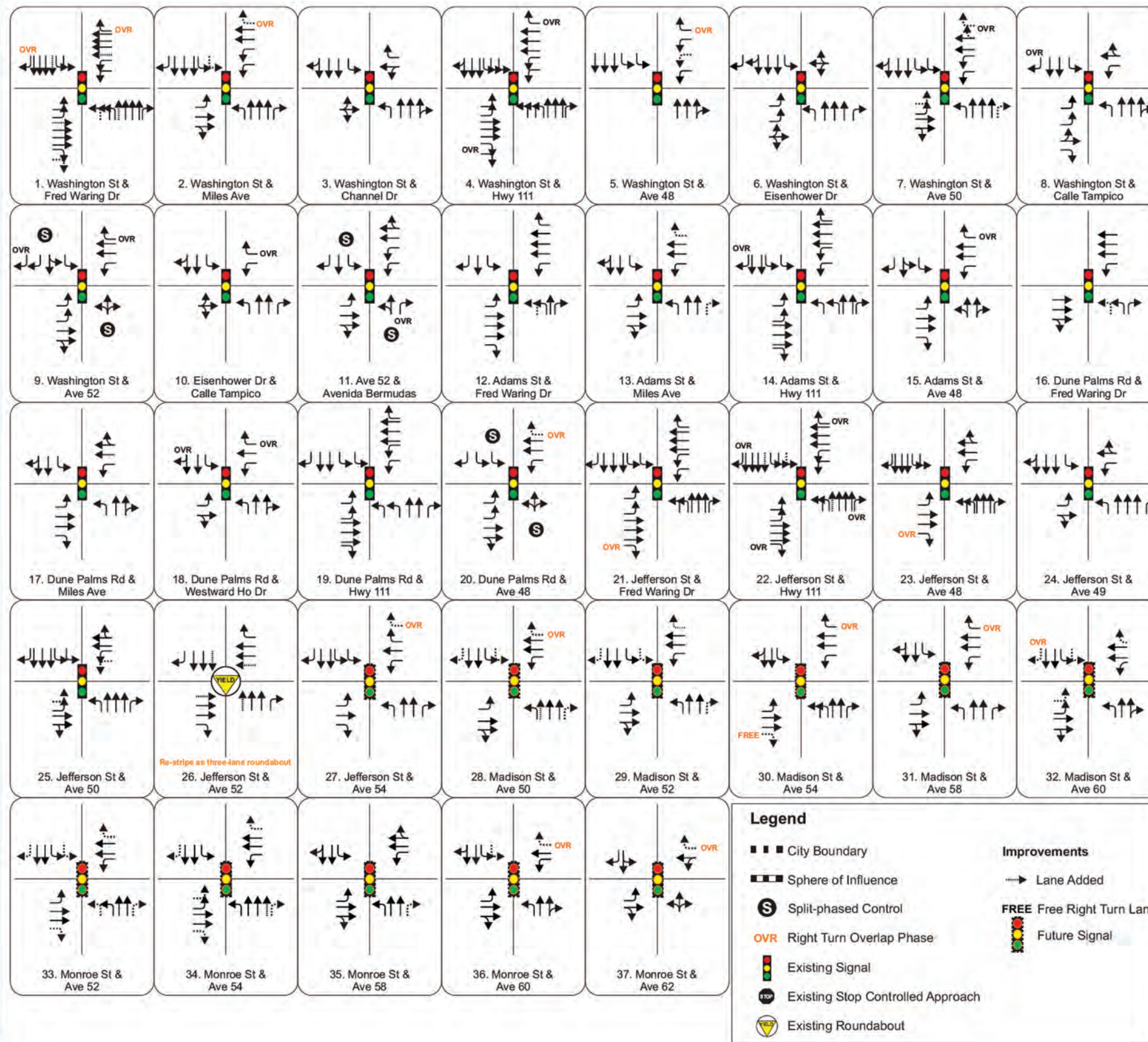
Washington Street Roadway Segment Deficiencies: The application of Transportation Demand Management (TDM) and Transportation Systems Management (TSM) strategies will effectively reduce peak hour traffic volumes along this segment, but it may still operate at unacceptable levels of service (LOS E or F) during peak hour upon General Plan build out. Therefore, potential impacts may not be fully mitigated below levels of significance.

Madison Street Roadway Segment Deficiency: The General Plan traffic analysis identified a segment deficiency on Madison Street between Airport Boulevard (Ave 56) and Avenue 54. There is some question whether this level of impacts will actually occur. Nonetheless, mitigation measures include the application of TDM and TSM strategies to reduce peak hour traffic volumes along this segment. It may still operate at unacceptable levels of service (LOS E or F) during peak hour upon General Plan build out. Therefore, potential impacts may not be fully mitigated below levels of significance.

Harrison Street Roadway Segment Deficiency: As an 8-lane Augmented Major Arterial, Harrison Street between Airport Boulevard (Ave 56) and Avenue 58 is forecast to exceed theoretical maximum carrying capacity by approximately 3,800 VPD. Harrison Street is assumed to function as an Augmented Major Road (76,000 vehicles per day), and would likely operate as an Expressway due to limited accessibility. Application of TDM and TSM strategies will help reduce peak hour traffic volumes along this segment but it may still operate at unacceptable levels of service (LOS E or F) during peak hour upon General Plan build out. Therefore, potential impacts may not be fully mitigated below levels of significance.

Intersection Impact Mitigation

As discussed above, intersections constitute the most constrained portion of the roadway network in the City the planning area. The following exhibit identifies the 37 intersections analyzed and illustrates the improvements (mitigation measures), both those already programmed and new/additional improvements, needed to provide acceptable levels of service (LOS D).



Source: Iteris, 05.18.12

City of La Quinta General Plan EIR
Prescribed Intersection Improvement
La Quinta, California

Special Intersection Management Provisions

As noted in the General Plan Traffic Impact Analysis (TIA) and this Circulation Element, it may not be possible to implement all of the recommended intersection improvements. These constrained intersections have been identified above, and recommendations for further enhancing the operation of these intersections and further mitigating adverse impacts by other means is described below.

The intersection improvements necessary to provide acceptable LOS upon build out of the preferred General Plan were detailed above. Some of the potential improvements would affect and require the cooperation of neighboring cities. In some instances, needed improvements could affect existing buildings and other structures, and may not be feasible. In addition, some recommendations from the *Washington Street/Highway 111 Transportation Systems Management (TSM)/Transportation Demand Management (TDM) Corridor Study* (VRPA, September 2009) are also considered. Special considerations for constrained intersections are as follows:

Washington Street @ Fred Waring Drive: Two approaches to achieving acceptable intersection operations may be combinations of 1) street widening, and 2) TSM/TDM measures. The application of TSM/TDM will depend on the extent of widening that is determined to be feasible, as presented below:

a. Intersection Widening

1. City of La Quinta jurisdiction widening could add a third northbound left-turn lane and a fourth northbound through lane. This would improve AM peak hour conditions to LOS E. The PM peak hour conditions would remain at LOS F but the average intersection delay would be reduced by 38 seconds per signal cycle.
2. Coordinate with the City of Palm Desert to consider the potential for improvements in the northwest intersection quadrant, specifically the adding of a fourth southbound through lane, a fourth westbound through lane, and a westbound right-turn overlap phase. With construction of these added to the widening recommended in the City of La Quinta, PM peak hour conditions would remain at LOS F but the average intersection delay would be reduced by an additional 20 seconds.

The City of Palm Desert General Plan (2004) does not call for these improvements, but does call for consideration of a third northbound left-turn lane in the City of Indian Wells, which is consistent with improvements in the City of La Quinta identified above. The City of Palm Desert should be encouraged to continue to coordinate with the City of Indian Wells for construction of an eastbound free-right turn lane.

3. Coordinate with the City of Indian Wells to consider improvements in the southwest intersection quadrant, specifically the adding of a fourth eastbound through lane and a second eastbound right-turn lane with a right-turn overlap phase. With construction of the two City of Indian Wells improvement-impacting lanes, but not assuming improvements in the City of Palm Desert, PM peak hour conditions would remain at LOS F but the average intersection delay would be reduced by an additional 26 seconds.

4. If the recommended improvements in the Cities of La Quinta, Palm Desert, and Indian Wells are all implemented, the PM peak hour conditions would be improved to LOS D operations.
5. Implement TSM/TDM measures for trip rerouting, in addition to some of the above listed improvements that are determined feasible.
 - a. Design and implement an Intelligent Transportation Systems (ITS) Master Plan in coordination with the cities of Palm Desert and Indian Wells, and in coordination with the Indian Wells Tennis Event Center. An ITS Plan would enable dynamic route reassignment of traffic around congestion and direct traffic to available parking through the use of Dynamic Message Signs and adaptive traffic signal control. The Plan would deliver the best access to events for attendees, and around event traffic for residents that are not attending the events.
 - To achieve non-event LOS E operations, and to minimize the level of impacts experienced at nearby intersections, approximately 200 northbound left-turning vehicles would need to be diverted, approximately 100 southbound left-turning vehicles would need to be diverted, and approximately 100 southbound through movement vehicles would need to be diverted. Assuming these trip diversions, the necessary roadway widening improvements would be reduced to the addition of the third northbound left-turn lane (City of La Quinta), the second eastbound right-turn lane with a right-turn overlap phase (City of Indian Wells), and a fourth westbound through lane (Cities of La Quinta and Palm Desert). Therefore, the 4th northbound through lane, 4th southbound through lane, 4th eastbound through lane, and westbound right-turn overlap phase, recommended previously, would no longer be necessary.
 - In order to achieve non-event LOS D operations, assuming the same approximate ranges of trip diversion shown above, the addition of the fourth eastbound through lane, the westbound right-turn overlap phase, and third eastbound left-turn lane would be required. Therefore, the 4th northbound through lane and 4th southbound through lane, recommended previously, would continue to no longer be necessary.

Adams Street @ Miles Avenue: Add a dedicated westbound right-turn lane, converting the number two through lane to a through only lane. Implementation of this improvement alone will achieve LOS E operations in the PM peak hour. Consider adding a dedicated northbound right-turn lane, converting the number two through lane to a through only lane order to achieve LOS D operations. This could impact three to four residential property yards and require relocation of power poles. This measure may not be feasible.

Jefferson Street @ Highway 111: Coordinate with the City of Indio in optimizing future intersection improvements. To the extent practicable, add a fourth northbound through lane. Add a fourth southbound through lane. Add a third southbound left-turn lane. While the prescribed third southbound left-turn lane may be feasible, the fourth north and southbound through lanes do not appear to be. Intersection operations will benefit from TSM programs and overall TDM efforts.

Madison Street @ Avenue 50: – Add a third northbound through lane and a dedicated right-turn lane, converting the new number three through lane to a through only lane. Add a dedicated southbound right-turn lane, converting the new number two through lanes to a through only lane. Add a westbound dedicated right-turn lane with a right-turn overlap phase, converting the new number two through lane to a through only lane. Management prescriptions include coordinating with the City of Indio to signalize this intersection. It should be noted that the City of Indio plans to maintain the planned four-lane roadway segment on Madison Street between Avenue 50 and 48. Therefore, further analysis and the application of TDM and TSM strategies are warranted.

In summary, while a variety of improvements and management strategies are prescribed for these four intersections, not all improvements may be possible and these intersections could operate at LOS E or F during peak periods by 2035.

Mitigation via Implementation of General Plan Policies and Programs

The Circulation Element of the Draft Comprehensive General Plan includes twenty-six (26) policies and twenty-nine (48) programs, which are designed to enhance the operation and efficiency of all aspects of the transportation system serving the planning area. Policies and programs address the on-going monitoring and management of traffic volumes and operating conditions, and the timing of required improvements to maintain acceptable levels of service.

Summary of Mitigation

The Draft General Plan, this EIR and the General Plan Traffic Study provide both programmatic and concrete/prescriptive actions and measures that are expected to reduce transportation impacts associated with the implementation of the proposed General Plan. In conjunction with the existing various regional transportation initiatives coordinated through the City and CVAG, the performance of transportation systems serving the City and planning area can be further enhanced. The continued thoughtful integration of land uses will also increase opportunities for mass transit and non-motorized means of transportation. Controlling access onto major arterial roadways will also serve to preserve capacity and limit the costs associated with expanded roadway infrastructure.

Even with the substantial feasible improvements and the implementation of TDM and TSM programs and strategies, up to six roadway segments and four intersections may operate at LOS E or F in build out year 2035.

Mitigation Monitoring/Reporting Program

- A. The City shall review and update the master plan of roads, including standards for ultimate rights-of-way and pavement width, and update Capital Improvement Programs (CIP) to ensure the timely securing of rights-of-way and construction of improvements consistent with the projected needs and standards set forth in the Circulation Element and Program EIR.

Responsible Parties: City Council, Planning Department, Public Works Department

- B. The City shall establish and maintain ongoing consultation and coordination with planning and engineering staffs of adjoining cities and transportation planning agencies to study and implement effective means of preserving and improving capacity along major roadways. Coordination efforts may include synchronized signalization, consolidation of access drives and restriction of access, construction of additional travel and turning lanes, raised median islands, and improvements to critical intersections.
Responsible Parties: Public Works Department, Planning Department, Adjoining Cities, CVAG, Riverside County, Caltrans
- C. The City shall periodically evaluate the operating conditions at each of the constrained intersections, and shall make recommendations to responsible agencies regarding needed improvements.
Responsible Parties: Public Works Department, Planning Department, Caltrans, Riverside County, CVAG
- D. The City shall pro-actively consult and coordinate with CVAG, SCAG and Caltrans and represent the City in transportation planning meetings to assure that City policies, programs and strategies are given full consideration in resolving regional transportation issues affecting the community.
Responsible Parties: City Council, Planning Department, Public Works Department, CVAG, SCAG, Caltrans
- E. The City shall continue to pro-actively promote the mass transit system expansion and innovation through ongoing consultation and coordination with the SunLine Transit Agency and CVAG.
Responsible Parties: City Council, Planning Department, Public Works Department, SunLine Transit Agency, CVAG
- F. The City shall continue to consult and coordinate with the SunLine Transit Agency and encourage the development of rideshare and other alternative, high occupancy transit programs for employers with sufficient numbers of employees, and for individuals seeking to locate potential rideshare partners.
Responsible Parties: City Council, Planning Department, SunLine Transit Agency
- G. The City shall monitor the effectiveness of land use planning proposals that integrate a mix of land uses, optimizes nearby interactions, reduce the need for travel outside the neighborhood, and shorten trips to work, shopping, public services and public park facilities.
Responsible Parties: Planning Department, Redevelopment Agency
- H. The City shall monitor the effectiveness of its master plan of bicycle-ways, golf cart/NEV routes and multi-use paths, including secure bicycle and golf cart/NEV storage facilities, and other support facilities which increase bicycle and golf cart use.
Responsible Parties: Planning Department, Public Works Department

- I. The City shall periodically review roadway design specifications, design standards and guidelines for public and private streets, and their effectiveness at meeting existing and anticipated demand, reducing traffic speeds in neighborhoods, and facilitating safe and efficient use of bicycles and other alternative modes of transportation.

Responsible Parties: Planning Department, Public Works Department, Planning Commission, City Council

P. Water Resources & Quality

Introduction

The existing water supply and water quality conditions for the General Plan Planning Area are discussed in this section. This section describes existing and future water demand to determine potential impacts on water supplies and water quality from the implementation of the proposed General Plan. Also considered is the current and projected availability and reliability of water supplies, including those associated with imported Colorado River and State Water Project water, as well from other water sources that have been identified.

The Coachella Valley Water District (CVWD) is responsible for managing water resources in the region, including the General Plan area. CVWD delivers domestic and irrigation water to La Quinta and its Sphere. Therefore, this section also discusses CVWD's ability to provide water supplies over the course of General Plan build out.

The Coachella Valley Urban Water Management Plan (CVWD UWMP), the CVWD Draft Water Management Plan and other CVWD reports, as well as materials from the California Department of Water Resources and other entities, have been consulted in the preparation of this discussion.

Thresholds of Significance/Criteria For Determining Significance

The following standards and criteria have been drawn from Appendix G: Environmental Checklist Form of the CEQA Guidelines. The following factors have been considered to ensure that the General Plan EIR adequately addresses potential impacts to water resources that may result from the adoption and implementation development of the General Plan. Implementation of the La Quinta General Plan will have a significant impact on water resources and quality if it would:

- a.) Violate any water quality standards or waste discharge requirements.
- b.) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

- c.) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site.
- d.) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.
- e.) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- f.) Otherwise substantially degrade water quality.

It should be noted that items c through e above are addressed Section H: Hydrology of this EIR.

1. Existing Conditions

The Coachella Valley and the Planning Area are within the Colorado River Watershed, which drains into the Salton Trough. The desert climate is characteristically dry, with an average of less than 4 inches of annual rainfall. Therefore, water is an especially limited and valuable resource. To satisfy the demand for water from residential, commercial and agricultural users, the Coachella Valley supplements local groundwater supplies with water from Northern California and the Colorado River.

Northern California water is conveyed to Southern California via the California aqueduct. Over 23 million people and 755,000 acres of agricultural lands are served.¹⁰⁶ Supplies to southern California vary annually based on weather. Water supplies are more available in wet years and decrease during dry years.

California is entitled to 4.4 million acre feet of Colorado River water per year, as set forth in a 1964 Supreme Court ruling. Although Colorado River water is one of the Coachella Valley's main source of water, it is considered poor quality. In addition to the high levels of total dissolved solids, this water has been cited as contributing to the salinity problems in the Valley. These issues are further discussed below under Water Quality.

Whitewater River Subbasin¹⁰⁷

The Coachella Valley is underlain by a substantial subsurface groundwater basin. Over millions of years, conditions created by the Valley's geology and water runoff from surrounding mountains have resulted in water collecting in the aquifer, which generally extends from the Whitewater River in the northwest to the Salton Sea in the southeast. The aquifer is naturally divided by fault barriers into subbasins, which are further divided into subareas. The Whitewater

¹⁰⁶ Department of Water Resources and Public Affairs, www.publicaffairs.water.ca.gov/swp/.

¹⁰⁷ "Engineer's Report on Water Supply and Replenishment Assessment: Lower Whitewater River Subbasin Area of Benefit, 2011-2012," prepared by Coachella Valley Water District, May 2011.

River Subbasin (also known as the “Indio Subbasin”) encompasses approximately 400 square miles and underlies most of the Coachella Valley. It is bounded on the north by Garnet Hill Fault, on the east by the San Andreas Fault, and on the south by the San Jacinto and Santa Rosa Mountains. It is estimated that the Subbasin contains approximately 28.9 acre-feet of groundwater within the first 1,000 feet below the ground surface.

There are five subareas within the Whitewater River Subbasin: the Palm Springs subarea, the Garnet Hill subarea, the Thermal subarea, the Thousand Palms subarea, and the Oasis subarea. The City and Sphere are underlain by the Thermal subarea, which is part of the Lower Whitewater River Subbasin.

Thermal Subarea

The division between the upper and lower portions of the Whitewater River subbasin is located in the Thermal subarea. The juncture of the Thermal Subarea with the Palm Springs Subarea, which lies to the west, occurs near Cathedral City. Based on measurement data for the Palm Springs and Thermal subareas, there appears to be no distinction between the water tables of the upper and lower subarea, except for the “hinge effect” of the Thermal subarea at Point Happy. Groundwater levels have generally remained stable, although more recently, increased pumpage has lowered groundwater levels in the lower Whitewater River subbasin.

Conditions in most of the Thermal Subarea are confined or semi-confined, with movement caused by differences in piezometric (pressure) levels. Although unconfined or free water conditions occur within alluvial fans such as those that at the base of the Santa Rosa Mountains, an area of reduced permeability, or “aquitard” occurs between the two aquifers. Reduced permeability is created where fine grained materials such as sand and gravel lenses occur. This aquitard forms the boundary between the upper and lower aquifers in the Thermal subarea.

The upper and aquifer zones of the Thermal subarea have similar lithology¹⁰⁸, although the lower aquifer is thought to be thicker and to receive more subsurface inflow than the upper aquifer. The lower aquifer is considered the most important source of groundwater in the Coachella Valley Groundwater basin. It serves the area easterly of Washington Street, which includes the La Quinta Planning Area. In this portion of the subarea, the top of the water table ranges from 300 to 600 feet below the surface. Although undetermined, the aquifer is believed to be at least 500 feet thick and some estimates suggest that it may be over 1000 feet thick. While the aquifer contains vast water supplies, water table levels vary based on demand. Underlying the lower subarea is an aquitard that is generally 100 to 200 feet thick, and up to as much as 500 feet thick in some areas along the edge of the Salton Sea.

Regional Water Supply and Demand

The Coachella Valley’s principal water source is groundwater. The subbasins underlying the Coachella Valley contain approximately 39.2 million acre-feet of water, of which about 28.8 million are within the Whitewater River subbasin. Natural recharge from precipitation and mountain runoff, supplemented with artificial recharge from imported Colorado River and State

¹⁰⁸ A rock or rock formation’s gross physical character.

Water Project water, and recycled water from wastewater treatment plants also provide water to the Coachella Valley.

During the twentieth century the Coachella Valley experienced a rapid depletion of its groundwater in storage. CVWD data shows that significant increases in total water demand in the Coachella Water Valley occurred during over the decades from 1936 (92,400 acre feet/year (AFY) to 376,000 AFY in 1999. The increase in water demand reflects both municipal water and agricultural irrigation. This is consistent with the growth of two primary economic activities in the Coachella Valley: agriculture and tourism. Agriculture began to develop as a viable industry in the Coachella Valley in the early 1900's, especially in the eastern Valley. More recently, the region has emerged as a leading destination resort area, characterized by lushly landscaped golf courses and residential communities. In 2009 groundwater use decreased to approximately 358,700 AFY, through the implementation of conservation measures, source substitution projects and the impacts of the economic downturn.

Regional Water Supply

Domestic and irrigation water is provided in the City and most of the Sphere by CVWD. Groundwater is the primary source for these water supplies, which CVWD extracts from the Whitewater River Subbasin by means of a system of deep wells within the region.

Total outflows exceed inflows in the Lower Whitewater River Subbasin, resulting in a condition known as overdraft. This condition has resulted in a decline in groundwater levels in many portions of the eastern Valley from La Quinta to the Salton Sea. Concerns related to these conditions include potential degradation of water quality and land subsidence. Water quality concerns are addressed herein; for further discussion of land subsidence, please see Section III-F, Geology and Soils.

CVWD estimates the annual overdraft balance based on outflows and inflows. It considers outflows due to production, subsurface drainage, including the agricultural tile drain system, and evapotranspiration from vegetation. Sources of inflow include natural inflow, non-consumptive return from groundwater and imported water use, and groundwater replenishment efforts. Based on these factors, the annual balance in the Subbasin through 2009 was estimated to be -7,457 acre feet.¹⁰⁹

Historic and Current Consumption

As shown in Table III-50, below, water withdrawals, or groundwater production, in the Lower Whitewater Subbasin have remained generally stable since 1999.

¹⁰⁹ Table 3, "Engineer's Report on Water Supply and Replenishment Assessment: Lower Whitewater River Subbasin Area of Benefit, 2011-2012," prepared by Coachella Valley Water District, May 2011."

Table III-50
Coachella Valley Water District Annual Water
Production
1999 – 2010

Year	Acre-Feet	Million Gallons
1999 ¹	168,300	54,866
2000 ²	166,700	54,344
2001	199,800	65,135
2002	172,300	56,170
2003	170,000	55,420
2004	170,000	55,420
2005	170,000	55,420
2006	170,000	55,420
2007	170,000	55,420
2008	170,000	55,420
2009 ³	160,000	52,160
2010	150,000	48,878

¹From the “Coachella Valley Water Management Plan, Table 3-2, Summary of Historical Water Supplies in 1936 and 1999” prepared by Montgomery Watson Harza.

²2002-2008 from the “Engineer’s Report on Water Supply and Replenishment Assessment: Lower Whitewater River Subbasin Area of Benefit, 2010-2011, Table 2” prepared by Coachella Valley Water District, April 2010.

³Assessable groundwater production estimated from reported and projected unreported groundwater production.

Source: “Engineer’s Report on Water Supply and Replenishment Assessment: Lower Whitewater River Subbasin Area of Benefit, 2011-2012, Table 2” prepared by Coachella Valley Water District, May 2011.

Domestic Water Facilities^{110,111}

The CVWD domestic water system is comprised of a system of 30 pressure zones in which water supplies are drawn from 100 active wells from water is distributed to users. CVWD uses pressure booster pump and regulating valve stations to transfer water between pressures zones.¹¹² The Planning Area is served by the following pressure zones: Valley, Upper, Middle and Lower La Quinta, and Lake Cahuilla.¹¹³ The District has nearly 75 enclosed storage reservoirs Domestic water is distributed via a system of pipelines ranging in size from 4-inches to 36-inches in diameter, located in public street rights of way. In 2005, CVWD provided 40.3 billion gallons of water to 240,573 residents in its service area.

¹¹⁰ <http://www.cvwd.org/about/waterandev.php>

¹¹¹ Written communication, Mark Johnson, Coachella Valley Water District, December 28, 2010.

¹¹² “Coachella Valley Water District Development Design Manual,” prepared by Coachella Valley Water District, 2010.

¹¹³ La Quinta Pressure Zones Map, prepared by Coachella Valley Water District, December 28, 2010.

Currently CVWD has 21 active wells in the General Plan Area. In addition, there are 6 booster stations and 10 planned or existing reservoirs in the Planning Area. Each reservoir has between 250,000 and 12 million gallons of capacity, with a total storage capacity of all reservoirs of 44.6 million gallons.¹¹⁴ CVWD has no plans to construct additional reservoirs in La Quinta at this time.

Imported Water

Imported State Water Project exchange water and Colorado River water provide additional water resources to the Valley. These sources are further discussed below. CVWD utilizes imported water to supply its recharge basins behind Dike 4 and its pilot facility in Martinez Canyon, as well as in the western portion of the Coachella Valley.

Colorado River Water

Colorado River Water is one of Coachella Valley's main sources of water. It is delivered via the Coachella branch of the All-American Canal, which extends throughout the Valley and terminates at Lake Cahuilla in southern La Quinta. Based on the Quantification Settlement Agreement (QSA), which quantifies Colorado River water allocations to agricultural water contractors and provides for water transfers between agencies, CVWD is entitled to 368,000 acre-feet per year in 2010. Total deliveries, once reduced by conveyance and distribution losses, are 337,000 acre-feet per year.¹¹⁵ Future allocations will increase by year 2026 through the end of the 75-year QSA term. The amount of Colorado River water that the Coachella Valley actually receives each year varies based on the amount of precipitation that occurs in the Colorado River watershed.

Issues affecting the long-term reliability of the Valley's Colorado River supply include an extended drought in the Colorado River Basin, the Colorado River shortage sharing agreement, issues related to protection of endangered species and habitat, climate change and legal challenges to the validity of the QSA. Although the state and CVWD have high priority status for the allocations provided for under the QSA and these supplies are expected to be reasonably reliable, state court decisions regarding lawsuits are pending until at least 2011.¹¹⁶

State Water Project

CVWD, along with Desert Water Agency (DWA), contracts with the Metropolitan Water District (MWD) for access to State Water Project (SWP) water in the Coachella Valley. Since no physical SWP water delivery facilities exist in the Valley, CVWD and DWA access SWP water through an exchange of Colorado River water from MWD's Colorado River Aqueduct, which extends through the Coachella Valley.

¹¹⁴ "Technical Background Report to the Safety Element Update, City of La Quinta, CA" prepared by Earth Consultants International, September 2010.

¹¹⁵ Table 4-2, "Draft Coachella Valley Water District Water Management Plan" prepared by Montgomery Watson Harza, December 2010.

¹¹⁶ "Draft Coachella Valley Water District Water Management Plan" prepared by Montgomery Watson Harza, December 2010.

In addition to the original “Table A” allocation contracts begun in 1962 and 1963, CVWD and DWA have contracted for additional SWP water from MWD through agreements reached in 2003, 2004 and 2007. Currently, all CVWD SWP sources, including the original and subsequent agreements, total 138,350 acre-feet per year. Based on the SWP Delivery Reliability Report issued by DWR, the average reliability of SWP Table A allocations through 2029 is 60%, which accounts for climate change. This represents a decrease in published reliability from previous DRR estimates.¹¹⁷ Accounting for all factors affecting the overall reliability of SWP supplies, CVWD assumes a long-term reliability of 50%.

CVWD uses SWP exchange water to recharge the Upper Whitewater River and the Mission Creek subbasins at recharge facilities located near Palm Springs.

Groundwater Recharge¹¹⁸

CVWD has implemented a groundwater replenishment program to prevent adverse impacts from the depletion of groundwater reserves. As noted above, imported water supplies from the Colorado River and State Water Project are used to artificially recharge the Upper and Lower Whitewater River and Mission Creek subbasins at CVWD recharge facilities in the Valley. CVWD has operated the Whitewater River Spreading Facility near Palm Springs since 1973, utilizing over 2 million acre-feet of SWP water. It has a recharge capacity of 300,000 acre-feet per year, and an annual recharge goal of 100,000 AFY.

The Thomas E. Levy Groundwater Replenishment Facility, located within the impoundment area of Dike 4 in the southern portion of the La Quinta General Plan Area. The Levy facility was operated as a pilot program beginning in 1997, with full-scale operations completed in 2009. It has an average recharge capacity of 40,000 AFY, which is limited by hydraulic and water delivery constraints associated with the Canal water distribution system. Therefore, the long-term average capacity is estimated of 32,000 AFY. In future, an additional pipeline and pumping station from Lake Cahuilla may be constructed.

CVWD has conducted a pilot recharge program at the second east Valley recharge facility in Martinez Canyon, south of the Planning Area, since 2005. When full-scale operations come on-line, the Martinez Canyon facility is expected to have an average annual recharge capacity of between 20,000 and 40,000 AFY. CVWD estimates that this project will begin initial full-scale operation in 2016, and reach capacity by 2018.

¹¹⁷ Table 4-4, “Draft Coachella Valley Water District Water Management Plan” prepared by Montgomery Watson Harza, December 2010.

¹¹⁸ “Draft Coachella Valley Water District Water Management Plan” prepared by Montgomery Watson Harza, December 2010.

Additional Water Sources

Reclaimed Water/Tertiary Treated Water

Reclaimed or tertiary treated water can be used for landscape irrigation, thus reducing the amount of domestic water required for such uses. There are six CVWD water reclamation plants, of which three have facilities to treat wastewater to tertiary levels, which is non-potable but suitable for irrigation. WRP-7, located in north Indio, serves the Planning Area, and has capacity to tertiary treat 2.5 million gallons of wastewater daily, with potential to expand up to 7.5 mgd. A second plant, WRP-4, located in Thermal, also serves the Planning Area but does not currently recycle wastewater. CVWD plans for this use in future as demand increases.¹¹⁹

CVWD is the regional stormwater agency and maintains regional drainage facilities in La Quinta, including agricultural drainage facilities. A system of CVWD laterals connected to the Coachella Canal currently deliver irrigation water to golf course and agricultural development in La Quinta. As agricultural uses are converted to residential and other urban development, particularly in the Sphere, these systems may continue to be used to deliver non-potable water to irrigate landscaping associated with future development.¹²⁰

Water Conservation

CVWD and the City of La Quinta implement a variety of water conservation efforts that are responsive to local conditions and compliant with state legislative requirements. Through its Draft Water Management Plan, CVWD had developed a system of policies and programs designed to reduce domestic water use and increase the efficiency of that use to the greatest extent feasible. The following briefly describes the major water conservation initiatives, including applicable legislation.

Senate Bill x7-7

Senate Bill (SB) x7-7 (2009) includes several requirements to reduce water consumption and increase water use efficiency statewide over the next decade. It mandates a 10% reduction in per capita urban water use by year 2015, and a 20% reduction by year 2020. It further requires that agricultural water suppliers prepare agricultural water management plans and develop efficient water management practices. Finally, it requires that sustainable water supplies be expanded at the regional level through the provision of incentives and alternative water supply sources, such as desalination and stormwater recovery.¹²¹

Water Efficient Landscaping

The California Water Conservation in Landscaping Act¹²² requires local jurisdictions to implement a water efficient landscape ordinance, either through adoption of the jurisdiction's own or through implementation of the state ordinance, by January 1, 1993. Amendments enacted

¹¹⁹ "Draft Coachella Valley Water District Water Management Plan", prepared by Montgomery Watson Harza, December 2010.

¹²⁰ Personal communication, Mark Johnson, CVWD, December 20, 2010.

¹²¹ "SBX7 7 (Steinberg) – November 2, 2009 Fact Sheet", <http://senweb03.senate.ca.gov/focus/outreach/sd23/200911enews/SBX77FactSheet.pdf> California Senate Bill (SB) x7-7, accessed via Google search, December 14, 2010.

¹²² California Government Code, Sections 65591, 65593, 65596.

in 2006 set forth more stringent requirements than those of the original legislation, with cities and counties required to meet or exceed the new standards. The CVWD ordinance, adopted in 2003 and updated in 2007, requires that outdoor water use by new development be reduced by 25% beyond state requirements. In 2009, CVWD and other water districts in the Coachella Valley, along with all Coachella Valley cities, Riverside County and the Coachella Valley Association of Governments (CVAG), developed a single landscape ordinance for adoption by each of these entities. The ordinance would encourage maximum efficiency for landscape water use, establish uniform landscape standards throughout the Valley, and limit turn on new golf courses. As such, it represents one of the most stringent such ordinances in the state.

The City has adopted the Water Efficient Landscape ordinance (No. 220, Chapter 8.13 in the City Municipal Code), which implements the requirements of the state's Model Efficient Landscaping Ordinance¹²³ and Water Conservation in Landscaping Act, including the more stringent requirements of the ordinance developed in conjunction with CVWD. The City ordinance is intended to establish effective water efficient landscape requirements for newly installed and rehabilitated landscaping. It requires that new and rehabilitated landscape plans for most residential, commercial and governmental projects are subject to City review, and must include a water conservation concept statement and verification that the plan provides for water efficient landscaping. Irrigation systems for existing landscaping may be subject to water audits when water supply allowances are exceeded; it prohibits the overflow of waste water from inefficient irrigation systems onto adjoining properties, and requires timely repair of broken or malfunctioning sprinkler heads or pipes.

Conversion of Uses

The Draft WMP prepared by CVWD establishes goals to reduce groundwater demand for agriculture and golf courses by converting portions of those uses to recycled or canal water. The Draft WMP projects a decrease in groundwater demand by agricultural uses by 2045 of 89% from 2009 levels. As of 2010, CVWD requires golf courses with access to recycled or canal water to utilize these sources for at least 90% of their irrigation demand by 2015.

Other Water Supplies

CVWD's Draft WMP describes other water supply sources that have been available in the past or may be available in the future. These include recycled water from fish farm operations (aquaculture), water transfer opportunities, desalinated drain and ocean water, and stormwater capture. The Draft WMP discusses the relative feasibility of each of these options, some of which may provide additional water supplies in future.

Integrated Regional Water Management Plan¹²⁴

The Integrated Regional Water Management (IRWM) Planning Act, enacted in 2002,¹²⁵ encourages the development of integrated regional strategies by local agencies to manage and

¹²³ California Code of Regulations Title 23, Waters Division 2, Department of Water Resources Chapter 2.7,

¹²⁴ "Draft Coachella Valley Water District Water Management Plan", prepared by Montgomery Watson Harza, December 2010.

¹²⁵ California Water Code, Division 6 Part 2.2, §10530 et seq., as amended.

improve the quality, quantity and reliability of water supplies. IRWM plans are reviewed by the California Department of Water Resources (DWR), which also funds water management projects. The Coachella Valley Regional Water Management Group (CVRWMG) was formed in 2008 through a Memorandum of Understanding between CVWD and four other regional water management agencies to develop a an Integrated Regional Water Management Plan. Through the Plan, the Management Group will be eligible for DWR grants. The Plan has completed public review and was adopted by the CVWD Board in December 2010.¹²⁶

Urban Water Management Plan

California Water Code California Water Code mandates that CVWD prepare an Urban Water Management Plan (UWMP) to analyze current and future water supplies and ensure sufficient supply to serve land uses within its service area. CVWD's previous UWMP was adopted in 2005¹²⁷ and has subsequently been updated. The 2010 UWMP has been completed.

Water Quality

In the Coachella Valley, groundwater quality is affected by depth, hydrogeologic or cultural features, such as proximity to faults or recharge basins, and the presence of contaminants. In general, the Valley has generally good to excellent water quality. Exceptions occur in portions of the Subbasin where perched or semi-perched water tables occur, where groundwater contains high concentrations of dissolved solids. In some areas in the Planning Area, long-term discharge associated septic systems may also affect groundwater quality. Importation of Colorado River water has also impacted groundwater quality in some areas. These issues are further discussed below.

The CVWD Draft WMP addresses existing and emerging issues associated with water quality in the Coachella Valley. These include salinity and the presence of a variety of contaminants, including total dissolved solids and nitrates. CVWD regularly monitors wells, and testing data provided in the most recent Water Quality Report shows water supplies meet all state and federal standards for drinking water. In some areas, low levels of naturally occurring arsenic have been found, however, these levels have remained at levels below the 10 ug/L Maximum Contaminant Level (MCL) standard. CVWD has three ion treatment facilities for arsenic removal; these are located in the Mecca, Thermal and Oasis. For the most part, water treatment in wells is limited to chlorination to assure disinfection.¹²⁸

Nitrates and total dissolved solids are briefly discussed below.

¹²⁶ Personal communication, Mark Johnson, CVWD, December 20, 2010.

¹²⁷ "Final Coachella Valley Water District Water Management Plan", prepared by Montgomery Watson Harza, December 2005.

¹²⁸ "Coachella Valley Water District Development Design Manual," prepared by Coachella Valley Water District, 2010.

Total Dissolved Solids

Total Dissolved Solids (TDS) naturally leach into groundwater from soils. The primary MCL for TDS ranges between 1,000 and 1,500 milligrams per liter (mg/L). Based on CVWD well monitoring data for 2009, TDS levels in the Valley ranged from 150 to 980 mg/L.

Nitrates

The most closely monitored chemical in drinking water is nitrate. Nitrate is a nitrogen compound, and the most common sources in groundwater include leaching of nitrogen-based fertilizers, animal waste and natural deposits such as mesquite hummocks or alluvial fan formations. Nitrates may also result from septic tank discharges. These compounds are often found in shallower aquifer zones and may result from activities such as recharge, pumping, and overdraft reduction.¹²⁹

In drinking water, nitrate levels over 45 mg/L pose a health risk for infants younger than six months old, as well as pregnant women and certain others specific conditions. Nitrate levels do not demonstrate rapid change, given well depths. Should nitrate levels show an increase, CVWD increases frequency of monitoring and is prepared to remove wells from service where indicated by nitrate levels. Data from CVWD 2009 well monitoring shows that average nitrate levels ranged from 2.1 to 7.1 mg/L.¹³⁰ Concentrations as high as 39 mg/L were detected in samples taken from wells serving the Cove Communities, which includes portions of La Quinta.

Impacts of Septic Systems on Groundwater Quality

Impacts on groundwater quality from long-term discharge from septic systems are more recent and generally less extensive as compared with other water quality issues. However, CVWD, the Regional Water Quality Control Board, and the Riverside County Department of Health acknowledge that groundwater quality may be impacted by these discharges. There are a variety of factors that influence impacts to groundwater from septic systems. These include population, relative density, wastewater volume, soil conditions and septic system maintenance. Where large populations at high densities are present, and where septic systems are poorly maintained, impacts are generally greater. The removal of wastewater through community sewer systems provides safeguards to protect groundwater resources from nitrate contamination. The majority of residential development in the Planning Area is served by existing sanitary sewer facilities. However, some areas, especially in the Sphere of Influence, still utilize septic systems. As future development builds out, sewer systems will be extended to serve these areas and septic systems will be abandoned.

¹²⁹ “Draft Coachella Valley Water District Water Management Plan”, prepared by Montgomery Watson Harza, December 2010.

¹³⁰ “Coachella Valley Water District 2011 Domestic Water Quality Summary, in the CVWD 2011 Domestic Water Quality Report.”

Water Quality Regulation

There are a variety of federal and state laws and regulations that are intended to assure the adequate planning, implementation and enforcement of water quality control effort. On a federal level, the primary pieces of legislation are the Clean Water Act and the National Environmental Policy Act (NEPA). Water quality statutes and administrative laws enacted by the State of California include the California Water Code, California Environmental Quality Act (CEQA) and California Code of Regulations. Health and Safety Code, Fish and Game Code and Public Resources Code also include applications to water quality.

California Water Code (Section 13260), states that “any person discharging waste or proposing to discharge waste that may affect waters of the State, except to a community sewer system” is required “to file a report of waste discharge with the regional board of that region” where densities exceed two (2) dwelling units/acre. For commercial and industrial wastewater generators where discharge volumes exceed certain thresholds, these requirements also apply.

The California Regional Water Quality Control Board (CRWQCB), Colorado River Basin Region, implements federal and state laws and regulations pertaining to water quality. The CRWQCB has prepared a Water Quality Control Plan for the Colorado River Basin, which was adopted in 1993. The plan is subject to periodic review by the State Water Quality Control Board and the US Environmental Protection Agency, and the Regional Board updates it as needed. In compliance with the federal Clean Water Act, the CRWQCB is also required to list water bodies that exceed or are expected to exceed water quality standards even with implementation of water quality control standards. Those affecting the Coachella Valley in the most current listing include the Coachella Valley Stormwater Channel and the Salton Sea. The Board sets specified time limits by which it will develop total maximum daily loads (TMDL) to limit the discharge of pollutants and thereby remedy water quality impairment for specified pollutants. TMDL completion dates for the Stormwater Channel range from 2014 to 2021.

The primary water quality issues in the Coachella Valley are salinity, as well as the presence of nitrates and total dissolved solids. In addition to addressing issues regarding septic and sewer systems, the CRWQCB oversees concerns about the Whitewater and other sources of surface water. CRWQCB monitors illegal discharges of human or animal waste, leaking fuel storage tanks, and unauthorized hazardous and toxic materials dumping sites.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) was adopted in 1990 to implement the federal Clean Water Act. NPDES requires that local jurisdictions adopt and implement storm water management plans and programs to “effectively prohibit non-storm water discharge into the storm drain and require controls to reduce the discharge of pollutants from storm water systems to waters of the United States to the maximum extent possible.” CEQA analysis is not required for pollutant control measures. The La Quinta Department of Public Works manages the NPDES program for the City.

2. Project Impacts

At build out, the proposed General Plan will result in 53,103 dwelling units. As compared with the previous General Plan, which planned for 78,952 units, this represents a decrease of approximately 25,849 units, or 32.7%. As a result of new residential development in the Planning Area, it is expected that a population of approximately 134,352 will be generated at build out. New commercial, industrial, public facilities and other types of development will also occur as a result of implementation of the proposed General Plan. The proposed Land Use Plan for the General Plan would result in less overall development as compared with the previous General Plan. Build out of the new residential and other types of development will result in an increase in water consumption compared to existing conditions, which has the potential to impacts water resources.

Water Demand Analysis

A Water Supply Study (WSS)¹³¹ has been prepared for the La Quinta General Plan and is included in Appendix I of this EIR. The WSS estimates current water demands generated within the Planning Area and projects future water demands that will be generated at build out of the proposed General Plan. It should be noted that the WSS prepared for the General Plan is programmatic, and qualifying individual development projects within the Planning Area may be subject to preparation of project-level Water Supply Assessments as warranted.

Existing Water Demands

Table III-51 shows the estimated water demands that are currently generated within the Planning Area. Methodology and assumptions utilized to estimate the existing water demands within the Planning Area are described in Appendix A of the WSS, which is included in full in Appendix I of this EIR.

¹³¹ “Water Supply Study for the proposed La Quinta General Plan Update 2010,” prepared by Terra Nova Planning & Research, June 21, 2011.

Table III-51
Estimate of Existing Water Service Demands

Land Use Designation	Landscaping (ac-ft/yr)	Potable (ac-ft/yr)	Total Demand (ac-ft/yr)	Daily Demand (mgd)
La Quinta City Limits				
Low Density Residential	6,482.65	4,091.66	10,574.31	9.44
Medium/High Density Residential	1,157.40	521.42	1,678.83	1.5
Commercial	311.87	1,007.61	1,319.48	1.18
Major Community Facilities	295.91	111.99	407.9	0.36
Open Space - Natural	N/A	N/A	-	-
Open Space- Recreation	16,465.48	N/A	16,465.48	14.7
Streets, Sidewalks, Medians	781.47	N/A	781.47	0.7
Total	25,494.78	5,732.69	31,227.46	27.88
Sphere of Influence				
Low Density Residential	857.11	157.31	1,014.42	0.91
Medium/High Density Residential	0.18	-	0.18	0
Commercial	17.71	43.03	60.74	0.05
Major Community Facilities	30.65	13.26	43.9	0.04
Streets, Sidewalks, Medians	149.17	N/A	149.17	0.13
Total	1,054.82	213.6	1,268.42	1.13
Planning Area Summary				
Low Density Residential	7,339.76	4,248.97	11,588.73	10.35
Medium/High Density Residential	1,157.58	521.42	1,679.01	1.5
Commercial/Industrial	329.58	1,050.64	1,380.22	1.23
Major Community Facilities	326.56	125.25	451.81	0.4
Open Space - Natural	N/A	N/A	-	-
Open Space- Recreation	16,465.48	N/A	16,465.48	14.7
Streets, Sidewalks, Medians	930.64	N/A	930.64	0.83
Total	26,549.59	5,946.28	32,495.88	29.01
Source: "La Quinta General Plan Water Resources Projections," Appendix A to Water Supply Assessment, prepared by Terra Nova Planning & Research Inc., January 2011.				

As seen in the Table above, the existing water demands for the La Quinta Planning Area are estimated to be 32,496 acre-feet per year, consisting of 31,227 acre-feet within City limits and 1,268 acre-feet within the Sphere of Influence. Existing water demands in the Planning Area are comprised of 3.9% within the Sphere and 96.1% within City limits.

Water Demands at Build Out (2035)

The following table shows the projected water demand for land uses in the City, Sphere and the entire planning area at build out, assuming that new development adheres to water efficiency building standards and existing development continues to generate business as usual water demands.

**Table III-52
Estimate of Water Service Demands at Build Out**

Land Use Designation	Landscaping (ac-ft/yr)	Potable (ac-ft/yr)	Total Demand (ac-ft/yr)	Daily Demand (mgd)
La Quinta City Limits				
Low Density Residential	9,294.22	4,881.63	14,175.85	12.66
Medium/High Density Residential	1,502.34	1,016.81	2,519.15	2.25
Commercial	496.72	1,360.39	1,857.11	1.66
Major Community Facilities	476.80	149.64	626.44	0.56
Open Space - Natural	N/A	N/A	N/A	N/A
Open Space- Recreation	17,681.77	N/A	17,681.77	15.79
Streets, Sidewalks, Medians	922.39	N/A	922.39	0.82
Total	30,374.25	7,408.47	37,782.72	33.73
Sphere of Influence				
Low Density Residential	12,309.74	3,375.02	15,684.76	14.00
Medium/High Density Residential	24.21	34.41	58.62	0.05
Commercial	192.99	377.52	570.51	0.51
Major Community Facilities	32.47	13.63	46.10	0.04
Streets, Sidewalks, Medians	324.17	N/A	324.17	0.29
Total	12,883.57	3,800.58	16,684.15	14.89
Planning Area Summary				
Low Density Residential	21,603.95	8,256.66	29,860.61	26.66
Medium/High Density Residential	1,526.55	1,051.22	2,577.77	2.30
Commercial/Industrial	689.71	1,737.91	2,427.62	2.17
Major Community Facilities	509.27	163.27	672.54	0.60
Open Space - Natural	N/A	N/A	-	-
Open Space- Recreation	17,681.77	N/A	17,681.77	15.79
Streets, Sidewalks, Medians	1,246.56	N/A	1,246.56	1.11
Total	43,257.82	11,209.05	54,466.87	48.62
Source: "La Quinta General Plan Water Resources Projections," Appendix A to Water Supply Assessment, prepared by Terra Nova Planning & Research Inc., January 2011.				

As seen in the Table above, the build out water demands for the La Quinta Planning Area are estimated to be 54,467 acre-feet per year, consisting of 37,783 acre-feet within City limits and 16,684 acre-feet within the Sphere of Influence. Build out water demands in the Planning Area are comprised of 30.6% within the Sphere and 69.3% within City limits.

Proposed Development

At build out development within the La Quinta Planning Area is expected to consume 54,467 acre-feet of water per year, which represents an increase in water demand of approximately 21,971 acre-feet compared to water demands generated by existing development. The Table below shows the projected water demand that will be generated from new development set forth in the proposed General Plan Update.

Table III-53
Estimate of Water Service Demands from New Development

La Quinta	Landscaping (ac-ft/yr)	Potable (ac-ft/yr)	Total Demand (ac-ft/yr)	Daily Demand (mgd)
City Limits	4,879.47	1,675.78	6,555.26	5.85
Sphere of Influence	11,828.75	3,586.98	15,415.73	13.76
Planning Area Summary	16,708.23	5,262.77	21,970.99	19.61

As seen in the Table above, 70% of the new water demand will be generated by new developed within the Sphere, and 30% will be generated by new development within City Limits.

Water Demand Consistency

CVWD's 2010 UWMP accounts for new growth and development that is expected to occur within the region including the Planning Area. Section 3.3 of the WSS describes the water demand projections for the La Quinta General Plan Update relative to the water demand projections set forth in the CVWD UWMP. The average per capita water demand for the CVWD Service Area is approximately 482 gallons per capita per day (gpcd) for 2010 and is projected to be 423 gpcd for 2035. The 2010 per capita water demand for the La Quinta Planning Area is approximately 473 gallons per day and is projected to be 361 gpcd in 2035. The water demand estimates for the La Quinta Planning Area for 2010 and 2035 are 2% and 15% more efficient compared to the CVWD estimates. As such, water demands generated by the La Quinta Planning Area are fully captured and accounted for within the CVWD UWMP projections. Therefore, water demand projections proposed by the La Quinta General Plan Update are consistent with the water demand estimates utilized by CVWD.

Impacts to Water Supply Resources

As described above, CVWD serves as the water provider for the City of La Quinta and the Sphere. Water supplies that serve the existing La Quinta Planning Area are derived from groundwater in storage and imported Colorado River water and SWP exchange water. All urban water demands are currently met through groundwater supplies. New water demands generated by proposed development set forth in the La Quinta General Plan Update will be met through a combination of groundwater, imported supplies, and reclaimed water.

CVWD expects to have sufficient water supplies to serve development in the Planning Area through 2035 and beyond by utilizing a combination of water supply sources and treating surface water supplies to potable quality standards. CVWD projects that, in 2035, the urban water demand will be supplied by a total of 242,700 acre-feet per year consisting of 53% groundwater, 20% treated Colorado River Water, 22% Untreated Colorado River Water, and 4% desalinated agricultural drain water.

CVWD's UWMP and the WMP provide long term water supply/demand planning in an effort to protect water resources, preserve water quality, and assure that water supplies are available to meet demands. CVWD's UWMP evaluates water demands relative to supplies for the period between 2010 and 2035 under normal, single, and multiple dry year conditions. The UWMP finds that with groundwater supplies, imported water supplies, water conservation programs, and

recharge activities water supplies are sufficient to meet demands during normal, single, and multiple dry year conditions through 2035.

Implementation of new growth and development set forth under the proposed General Plan will result in an increase in the demand for water of approximately 6,555 acre-feet within City Limits and 15,416 acre-feet within the Sphere of Influence by 2035. This new demand will be met by groundwater, imported Colorado River water, desalinated agricultural drain water, or a combination thereof. As described above, CVWD has accounted for this increased water demand in conjunction with all other projected water demands within the service area and has determined that through the utilization of a combination of water supply sources sufficient water supplies will be available to meet demands in 2035. As such, the level of additional water supplies needed to meet demands generated by development within City Limits and the Sphere at build out of the General Plan will not substantially deplete groundwater reserves or interfere with groundwater recharge.

The City of La Quinta relies on CVWD to manage and supply water resources. Nonetheless, the City is committed to promoting water conservation and achieving water savings, protecting groundwater reserves, and preserving groundwater quality. In the La Quinta Planning Area water conservation can be achieved through retrofitting existing development, installing water efficient appliances, the use of new technology, and advanced irrigation control for outdoor landscaping.

Source Substitution

At build out, 20% (11,209 acre-feet) of the water demands within the Planning Area will be generated by potable demands whereas 80% (43,258 acre-feet) will be generated by non-potable demands, such as landscaping. The use of non-potable water supplies for the irrigation of recreational open space, especially golf course development, as well as other landscaped area protects groundwater reserves by utilizing an alternative water supply source.

Water Resources and Climate Change

The region's water supply consists of both surface and groundwater supplies, which have varying susceptibility to climate change. Surface water supplies are especially susceptible to increasing temperatures that are associated with changing climatic conditions. Groundwater reserves tend to be somewhat protected from climate change since they are underground and are not susceptible to increased evaporation due to elevated temperatures. As such, CVWD's long term water management strategy relies on conjunctive use thereby maximizing the use of surface flows when they are available including use of surface water to recharge the groundwater basin, and the use of banked groundwater supplies when surface flows are limited or unavailable. Given the substantial amount of uncertainty associated with predicting the affect that climate change will have on water resources, CVWD continuously monitors inflows and outflows in the basin, implements programs to conserve water, recharge the basin, and protect water resources, and routinely updates planning and management strategies to incorporate the latest available information and technologies.

Water Quality

The quality of water within the Whitewater River Subbasin and both treated and untreated Colorado River water is described as good in the CVWD UWMP (Table 5-13). The 2011 Water Quality Report prepared by CVWD shows the domestic water quality by service area. Monitoring for certain contaminants has been conducted and no established thresholds for water quality standards have been exceeded within the CVWD service area. The primary groundwater quality concerns in the Whitewater River Subbasin are salinity and nitrate.¹³² Arsenic, perchlorate, chromium-6 uranium, carcinogens, and endocrine disrupting compounds have been identified as emerging issues and are monitored by CVWD.¹³³

Salinity

Colorado River water is used for direct recharge to groundwater reserves and is relatively high in salinity. Salinity levels of surface water supplies within the service area range from an average of 636 mg/L to of 790 mg/L. CVWD is evaluating and pursuing several options to limit the concentration of salt in recharge supplies. One option is to directly import SWP supplies via construction of a SWP extension pipeline that would connect to the Whitewater and Mission Creek spreading facilities. SWP supplies typically have an average total dissolved solids concentration of 245 mg/L. Other option is to treat Colorado River water through a desalination process before recharge, although this option may be cost prohibitive. CVWD will continue to monitor TDS in recharge supplies and groundwater. With implementation of the CVWMP salinity will not affect groundwater supply reliability.

Nitrates

Groundwater quality may also be adversely impacted by long-term discharge from on-lot septic systems. These impacts to groundwater quality are expected to be greatest where septic systems serve large populations in high densities, such as the La Quinta cove community. For the City of La Quinta, nitrate concentrations range from “not detected” to a maximum of 40 mg/L. The average nitrate concentration was 7 mg/L within the La Quinta service area. The MCL for nitrate has been set at 45 mg/L. Although domestic water delivered by CVWD was below this threshold, the maximum concentration was approaching the threshold. Nitrates in the groundwater supply are attributed to leaching of fertilizers, animal waste, and natural deposits. Expanding the sewer system and removing on-lot septic may further limit nitrate accumulation in groundwater reserves.

Water Quality Impacts

Impacts to water quality are expected to be comparable to or slightly less than those associated with the 2002 General Plan. The proposed General Plan provides for fewer residential units and overall less commercial and industrial square footage than does the 2002 General Plan.

A majority of the new development in the Planning Area will be required to connect to community sewer facilities and, over time, it is expected that lots currently using septic systems

¹³² “CVWD 2011 Domestic Water Quality Table,” prepared by CVWD, 2011.

¹³³ Refer to section 4.5.2 of the Water Supply Study for additional information on emerging pollutants of concern.

will be provided with the opportunity to connect to sanitary sewer facilities, thereby reducing the potential for nitrate leaching.

The proposed General Plan is not expected to impacts water quality from project implementation. However, to further limit potential impacts to water resources and reduce impacts to less than significant levels the following mitigation measures are proposed. Further, implementation of the proposed General Plan will ensure the continued implementation of federal, state, local and all other applicable pollution control standards.

3. Mitigation

Water Conservation

Increasing demands on water supplies in the General Plan Area require the implementation of short and long-term water conservation efforts to ensure the continued availability of this resource. Reduction in per capita consumption as well as water-efficient landscaping design and management are among the best conservation opportunities. The City's Water efficient landscape ordinance prohibits washing driveways and walkways with water, excessive runoff of landscape irrigation water, and other wasteful water practices. It establishes penalties when these requirements are violated. There are a variety of state and regional mandates in place intended to reduce urban water consumption over the next several decades. As previously noted, new state requirements mandate a 10% reduction in per capita urban water use by year 2015, and 20% reduction by year 2020. The CVWD water efficient landscape ordinance, on which the City ordinance is based, requires that outdoor water use by new development be reduced by 25% over mandated state levels. Further, the CVWD Draft WMP requires that golf course users with access to canal or recycled water convert at least 90% of their irrigation water use to those sources by 2015.

General Mitigation Measures

Groundwater subareas are not defined by jurisdictional boundaries. The issues of groundwater depletion and contamination addressed herein are regional and local issues. Therefore, in Southern California, the efficient use and increased conservation of water will continue to be critical issues to be considered in community planning and development. The City and CVWD must continue to collaborate to protect and manage water resources.

There are a variety of goals, policies, and programs included in the proposed City General Plan update that are intended to ensure the continued availability of a dependable supply of safe, high-quality domestic water for all community segments. The following mitigation measures shall be implemented to reduce the potential impacts to water resources associated with implementation of the proposed General Plan to less than significant levels:

1. The City shall coordinate and cooperate with CVWD to ensure City-wide compliance with State Senate Bill x7-7 by implementing policies to reduce per capita urban water use by 10% by year 2015, and 20% reduction by year 2020, including landscaping conversion programs and the smart irrigation control program; expanding the availability

of sustainable water supplies such as tertiary treated water, and encouraging its use for landscape irrigation purposes, especially for irrigating golf courses and other large landscaped areas.

2. The City should review and amend its Development Standards to require that all new development demonstrate a reduction of domestic water consumption equivalent to the CalGreen Tier One standards in effect at the time of development.
3. The City shall continue to implement its Water Efficient Landscape ordinance by requiring that City and private sector development projects implement water efficient landscaping plans to meet or exceed current water efficiency standards.
4. The City shall require that new development reduce its projected water consumption over “business as usual” consumption rates.
5. In conjunction with the Coachella Valley Water District as well as independently, the City shall develop programs to allow and encourage the retrofitting of existing water-intensive appliances and irrigation systems in existing development.
6. The City and Coachella Valley Water District shall review future development proposals that propose to convert agricultural uses to urban development to ensure that non-potable water is used for irrigation purposes, and that new irrigation systems utilize existing agricultural drainage and irrigation water delivery facilities to the greatest extent feasible.
7. The City shall continue to require that all new developments use water conserving appliances and fixtures, including low-flush toilets and low-flow showerheads and faucets, as well as the application of water-conserving technologies in conformance with Section 17921.3 of the Health and Safety Code, Title 20, California Administrative Code Section 1601(b), and applicable sections of Title 24 of the State Code.
8. The City shall continue to encourage that new development use faucets, showerheads and appliances in new development that exceed Title 20 and Title 24 water efficiency requirements.
9. The City shall, prior to approval of development plans, require that qualifying future development in the General Plan Area have an adopted Water Supply Assessment in compliance with AB 610 and 221.
10. To the greatest extent practicable, the City shall require new development to connect to the community sanitary sewer system.
11. The City shall review and amend its Development Standards and Review Procedures to ensure coordination with the Coachella Valley Water District and to assure that existing sewer service along with the extension of sewer service is capable of meeting the needs of current and future development.

12. To the greatest extent feasible, the City shall coordinate with the Coachella Valley Water District to encourage the elimination of septic systems where they occur within the City.

Mitigation Monitoring and Reporting

- A. The Planning Department and the City Engineer shall review all development proposals to evaluate their potential for adverse impacts on water quality and quantity, and shall require all development to mitigate any significant adverse impacts.

Responsible Parties: Planning Department, City Engineer, Coachella Valley Water District, project developer.

- B. The City shall continue to coordinate and cooperate with the Coachella Valley Water District to ensure that the groundwater aquifer is protected from excessive extraction.

Responsible Parties: Planning Department, City Engineer, Coachella Valley Water District.

LA QUINTA GENERAL PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT

IV. UNAVOIDABLE SIGNIFICANT IMPACTS

An assessment of potential environmental impacts associated with implementation and build out of the La Quinta General Plan Update was provided in Section III of this EIR. The analysis led to a determination of the level of impact on each environmental resource, including no impact, less than significant impact, less than significant with mitigation, or potentially unavoidable significant impact as a result of build out of the General Plan. This section summarizes those impacts that are potentially unavoidable. Even with the imposition of mitigation measures, impacts to the following categories will remain significant and are unavoidable.

Air Quality

Implementation of the General Plan Update will result in significant air quality impacts in the La Quinta Planning Area. Air pollutants will be generated from a variety of activities, including grading and construction, vehicle emissions, and daily operations. Emissions generated by vehicular traffic are projected to be the greatest source of air pollutants. The use of natural gas and electricity for operation of existing and new buildings and structures will also result in the emission of air pollutants.

Construction Emissions

Air quality emissions from construction activities will occur as a result of new development within the City limits and Sphere of Influence. As discussed in Section III of this EIR, emissions from construction within the City are projected to remain below established thresholds for all criteria pollutants except for NO_x and ROG. As shown in Section III, approximately 122 pounds per day of NO_x and 818 pounds per day of ROG are expected even with the implementation of mitigation measures. This is well above the 75 pound per day threshold established by SCAQMD. As such air quality emissions from NO_x and ROG's during construction activities within City limits have the potential to result in significant and unavoidable impacts.

Construction related air quality emissions from the development of lands within the Sphere of Influence are projected to exceed established daily thresholds for NO_x and ROG, even with

implementation of mitigation measures. As shown in Section III of this EIR, approximately 104 pounds per day of NO_x, and 697 pounds per day of ROG have the potential to occur during construction activities. This is above the SCAQMD thresholds of 100 pounds per day for NO_x, and 75 pound per day for ROG. Air quality emissions from NO_x and ROG during construction activities within the Sphere of Influence have the potential to result in significant and unavoidable impacts.

Air pollutant emissions from construction activities are temporary and will end once construction is complete. Nonetheless, during construction activities and assuming simultaneous construction of vacant lands within the Planning Area, the proposed General Plan Update has the potential to result in a cumulatively considerable net increase of NO_x and ROG. Should construction activities in the City and Sphere occur simultaneously at the rates assumed in Section III, emissions of PM_{2.5} and PM₁₀ will also exceed thresholds of significance, at 261 and 58 pounds per day, respectively. Projections of these criteria pollutants exceed established daily thresholds and have the potential to result in significant and unavoidable impacts for these criteria pollutants.

Operation Emissions

For operation of the General Plan Update, air quality emissions have the potential to result in a cumulatively considerable net increase of all six criteria pollutants, including CO, NO_x, SO_x, PM₁₀, PM_{2.5}, and ROG, as well as greenhouse gas emissions. Emissions of air quality pollutants from operation include the use of electricity and natural gas, as well as area source and moving source emissions. Projections of these pollutants exceed established daily thresholds and have the potential to result in significant and unavoidable impacts.

Emission from the consumption of electricity will primarily occur offsite, where electricity is generated. As such, the Planning Area will be indirectly impacted by these emissions. Nonetheless, the Planning Area is responsible for generating the electricity demand. While it is expected that the electricity grid mix will incorporate more renewables in future years, the use of coal and natural gas fired power plant will contribute significant emissions generated by the onsite energy demand.

Natural gas generation facilities and onsite use of natural gas for cooking, heating, and other uses will result in significant impacts. Although some of these emissions may not occur within the Planning Area, as no such generating facilities exist within the planning area, the emission projections result in a considerable increase, with significant impacts.

While implementation of the proposed mitigation measures and Greenhouse Gas Reduction Plan may be effective in substantially reducing emissions to levels below significance for certain sectors, emissions from moving sources will remain significant and are unavoidable.

The City has varying levels of control over the avoidance of emissions. Although the EIR sets forth all feasible mitigation measures and a comprehensive Greenhouse Gas Reduction Plan has been prepared, air quality emissions may remain significant and unavoidable. Regardless of mitigation measures, development of the General Plan will contribute to cumulative air quality impacts locally and regionally. Although emissions can be mitigated to a certain degree,

significant and unavoidable impacts to air quality, including greenhouse gas emissions, will occur as a result of development of the General Plan.

The implementation of mitigation measures for project-specific proposals is an effective means to reducing air quality impacts for the entire General Plan area. Design features that result in minimal trip generation, increase the use of green building design and technologies, provide alternative transportation options and onsite features such as electric charging station, and incorporate the use of alternative energy sources both locally and regionally through technologies such as individual and region-wide solar roof installation projects and region-wide wind farm development, will reduce the emissions associated with build out of the Planning Area. These measures will not only reduce emissions of criteria pollutants, but will also reduce emissions of greenhouse gases.

Traffic

The consequences of General Plan build out have been evaluated for the 63 major roadway segments and 37 intersections. Based on this analysis, the proposed General Plan is projected to generate a total of approximately 635,905 average daily trips. Of these, 449,489 ADT would be generated within the City's corporate limits and 186,416 would be generated in the City Sphere-of-Influence.

Within the City's corporate limits, the proposed Land Use Plan will generate about 3.6% more traffic than build out of the 2002 General Plan. Within the City's Sphere, the proposed Land Use Plan will generate about 34% more traffic than build out of the 2002 General Plan land use designations.

The majority of the roadway segments are forecast to operate at acceptable levels of service (V/C ratios less than or equal to 0.90 or LOS D or better). Three segments are projected to operate at LOS E and three at LOS F at 2035 build out.

- Washington Street segments between Avenue 42 and Miles Avenue and between Highway 111 and Eisenhower Drive (6-lane Major Arterial) are forecast to exceed theoretical maximum carrying capacity by up to 3,000 VPD with the most problematic segment between Fred Waring Drive and Miles Avenue. LOS D service volumes are exceeded by over 9,000 VPD.
- Madison Street between Avenue 54 and Airport Boulevard (4-lane Primary Arterial) is forecast to exceed theoretical maximum carrying capacity by approximately 4,900 VPD. LOS D service volumes are exceeded by over 9,000 VPD.
- Harrison Street between Airport Boulevard and Avenue 58 (8-lane Augmented Major) is forecast to exceed theoretical maximum carrying capacity by approximately 3,800 VPD. Although the capacity of Harrison Street was assumed to be that of an Augmented Major Road (76,000 vehicles per day), it would likely operate as an Expressway due to limited accessibility compared to an Augmented Major Road, thus carrying a larger capacity. Prior study by the County raised the potential of grade-separated intersections to further enhance capacity.

Of the 37 intersections analyzed, the following four are not expected to be able to accommodate all the required build out improvements and therefore have the potential to be operating at unacceptable levels of service by 2035 General Plan build out:

- Washington Street @ Fred Waring Drive;
- Adams Street @ Miles Avenue;
- Jefferson Street @ Highway 111;
- Madison Street @ Avenue 50.

It should also be noted that three of the four impacted intersections are shared between more than one jurisdiction. For instance, the Washington Street/Fred Waring Drive intersection is located within the corporate boundaries of the cities of La Quinta, Palm Desert and Indian Wells. In these cases, close and on-going coordination between cities will be necessary to provide optimum intersection improvements and to otherwise address forecast operational deficiencies. However, even with the implementation of feasible mitigation measures, impacts will be significant and unavoidable.

LA QUINTA GENERAL PLAN

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V. PROJECT ALTERNATIVES

A. Introduction

Impacts associated with build out of the various alternatives to the proposed General Plan Update are considered in this section of the EIR. A wide range of potential impacts, such as land use, traffic and circulation, soils and geology, air and water quality, hydrological issues, biological and cultural resources, and population and housing, are considered in Section III.

The potential impacts associated with the same range of issues that are evaluated in Section III are discussed in this section for three additional General Plan scenarios, as follows: “No Project” Alternative (2002 General Plan); Alternative I General Plan Scenario; and Alternative II. The land use assumptions for each alternative are described in Section V.C., below.

Table V-1 illustrates the land use build out summary for the Preferred Alternative. The build out summaries for each of the alternatives are illustrated below.

Table V-1
Preferred Alternative
Build Out Summary: City Limits

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Low Density Residential	4,006.0	1,583.7	5,589.7	20,834	4,751	25,585
Medium/High Density Residential	1,292.4	373.6	1,666.0	2,655	3,362	6,017
Residential Subtotal	5,298.4	1,957.3	7,255.7	23,489	8,114	31,603
				Existing SF	Potential SF	Total SF
General Commercial	385.6	184.0	569.6	3,695,282	1,763,309	5,458,591
Tourist Commercial	206.6	138.9	345.5	1,979,889	1,331,106	3,310,996
Village Commercial	77.1	12.9	90.0	738,865	123,623	862,488
Commercial Subtotal	669.3	335.8	1,005.1	6,414,036	3,218,039	9,632,074
Major Community Facilities	252.7	193.8	446.5			
Open Space - Natural	2,171.6	4,761.7	6,933.3			
Open Space - Recreation	4,392.2	867.0	5,259.2			
Street Rights-of-Way	1,764.6	191.1	1,955.7			
Grand Total	14,548.8	8,306.7	22,855.5			

Table V-2
Preferred Alternative
Build Out Summary: Sphere of Influence

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Low Density Residential	551.5	6,826.6	7,378.1	801	20,480	21,281
Medium/High Density Residential	0.2	24.4	24.6	-	219	219
Subtotal	551.7	6,851.0	7,402.7	801	20,699	21,500
				Existing SF	Potential SF	Total SF
General Commercial	28.6	256.6	285.1	273,760	2,458,797	2,732,557
Industrial/Lgt. Mfg.	0	63.8	63.8	-	611,408	611,408
Major Community Facilities	28.17	1.61	29.8			
Street Rights-of-Way	319.93	0	319.9			
Grand Total	928.4	7,173.0	8,101.4			

**Table V-3
Preferred Alternative
Build Out Summary: Entire Planning Area**

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Low Density Residential ^{1,3}	4,557.5	8,410.3	12,967.8	21,635	25,231	46,866
Medium/High Density ^{2,3} Residential	1,292.6	398.0	1,690.6	2,655	3,582	6,236
Total	5,850.1	8,808.3	14,658.4	24,290	28,813	53,103
				Existing SF	Potential SF	Total SF
General Commercial	414.2	440.6	854.7	3,969,042	4,222,106	8,191,148
Tourist Commercial	206.6	138.9	345.5	1,979,889	1,331,106	3,310,996
Village Commercial	77.1	12.9	90.0	738,865	123,623	862,488
Total⁴	697.9	592.4	1,290.2	6,687,796	5,676,835	12,364,631
Industrial/Lgt. Mfg.	0.0	63.8	63.8	-	611,408	611,408
Major Community Facilities	280.9	195.4	476.3			
Open Space - Natural	2,171.6	4,761.7	6,933.3			
Open Space - Recreation	4,392.2	867.0	5,259.2			
Street Rights-of-Way	2,084.5	191.1	2,275.6			
Grand Total	15,477.2	15,479.7	30,956.9			
¹ Includes single-family attached and detached housing units. ² Includes single-family attached and detached and multi-family housing units. ³ Future residential development is assumed to occur at 75% of the maximum density permitted. ⁴ Assumes 22% lot coverage for commercial and industrial development. Assumes 70% of TC and VC developed as commercial.						

B. Statement of Project Objectives

The City of La Quinta developed a Vision for the General Plan Update, and prepared Guiding Principles for the General Plan, as follows:

- ♦ **A Neighborhood Oriented Community** – Strive to ensure that existing and future housing for all residents continues to be diverse in type and of high quality. Establish and maintain connections between existing and future neighborhoods, including existing housing stock and associated infrastructure.
- ♦ **A Healthy, Vibrant and Heritage Minded Community** – Ensure parks, public facilities and open spaces are appropriately sized and designed to meet the needs and interests of all segments of the community. Continue to ensure that all land uses cohesively exist with the area's natural, cultural and historical heritage.
- ♦ **A Fiscally Sound Community** – Capitalize on our unique development opportunities, especially within the Highway 111 Corridor and the Village area by focusing on shopping,

dining, entertainment, professional and mixed use options while improving the aesthetics of the community.

- ♦ **A Safe Community** – Continue to enforce development standards that promote safe indoor and outdoor spaces and provide emergency services that are adequately funded, staffed, and equipped to provide timely response.
- ♦ **A Full Service Community** – Ensure that streets, water and sewer systems, storm drains, and other infrastructure is maintained in good working order and of adequate service level to address existing and future needs.
- ♦ **A Resort Oriented Community** – Maintain and improve the opportunities for La Quinta to be recognized, both nationally and internationally, as a top resort and recreation destination.
- ♦ **A Circulation Minded Community** – Promote and encourage a broad range of transportation opportunities, especially those that reduce the impact to our environment, as well as effectively moving people and goods. Continue to work closely with neighboring communities and regional agencies to address regional transportation issues.
- ♦ **A Conservation Focused Community** – Promote and encourage the efficient use of energy and water; minimize air and water pollution; reduce noise and light pollution; preserve native habitat; reduce litter; and increase recycling programs.

These Guiding Principles form the basis for the Project Objectives described below.

1. The preservation and enhancement of the City's quality of life.
2. The preservation and enhancement of existing neighborhoods.
3. A balance of housing types to accommodate the needs of all current and future residents.
4. The build out of a wide-ranging economic base providing jobs and sufficient revenues to maintain the high levels of services the City has been able to provide its residents.
5. The development of comprehensive transportation system that reduces vehicle trips and encourages alternative transportation routes for pedestrian, equestrian and bicycle use.
6. The preservation of open space, water quality and air quality to the greatest extent possible.

C. Alternative Projects Selected for Detailed Analysis

1. No Project Alternative

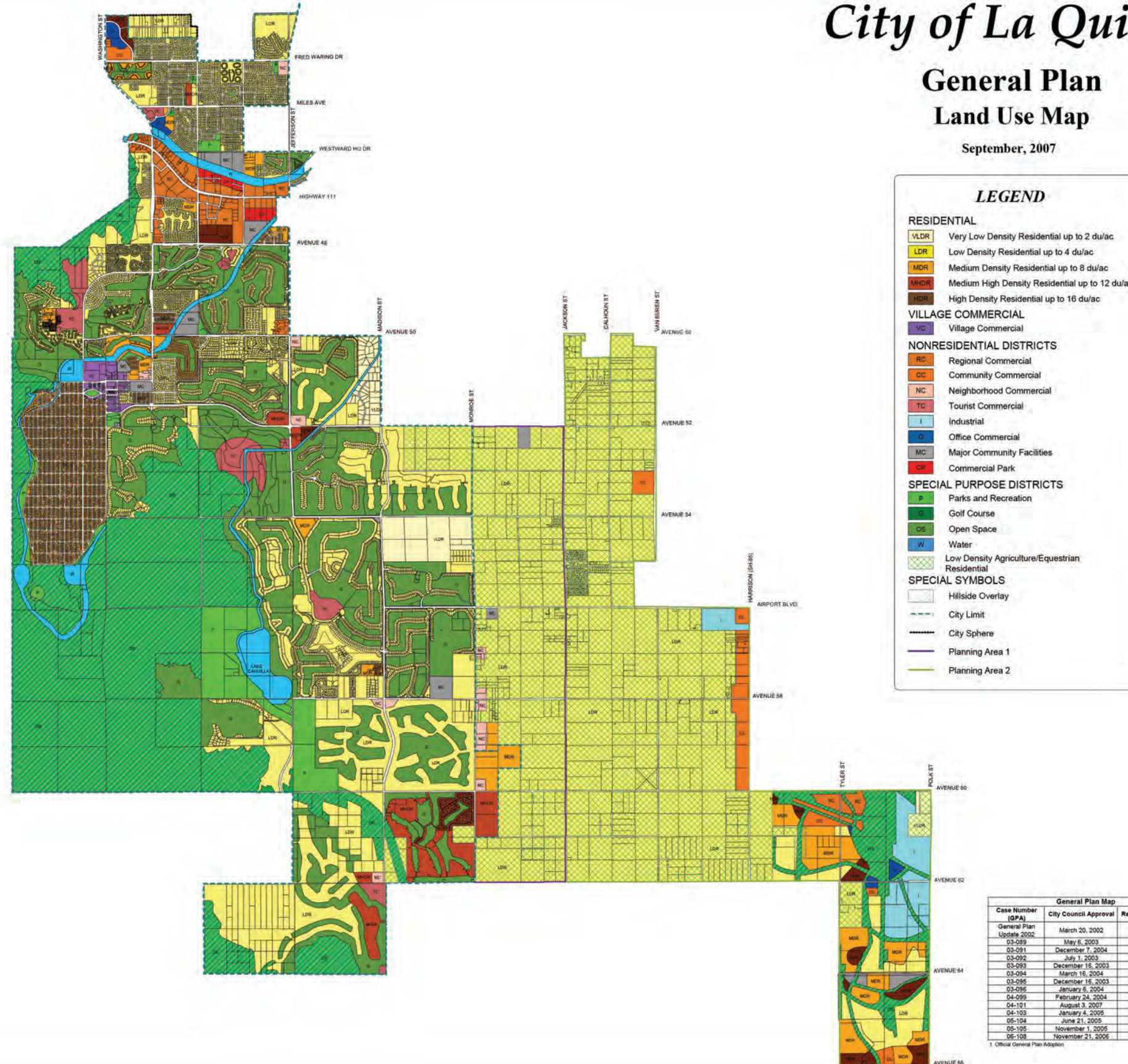
The No Project Alternative assumes that the build out of the General Plan would occur under existing City and County General Plan land use designations. Within the City, that build out would occur as planned in the currently approved General Plan. In the City's Sphere of Influence, build out would occur as anticipated in the Riverside County General Plan in the north Sphere area; and as proposed in the Vista Santa Rosa Land Use Plan in the east Sphere area.

Within the City limits, this alternative is very similar to the Preferred Alternative. The most significant differences with the Preferred Alternative occur in the Sphere of Influence. The County's General Plan and Vista Santa Rosa Land Use Plan propose primarily very low and low density residential lands, with a community center and commercial core occurring along Airport Boulevard, generally east of Van Buren. The single family residential land use designations generally range from 1 unit per two acres to two units per acre. Medium and Medium High Density Residential lands are proposed adjacent to the Community Center and commercial land uses, and are estimated to build out in the range of 4 to 10 units per acre. Along Harrison Street, between Airport Boulevard and Avenue 61 (extended), Business Park and Tourist Commercial uses are proposed.

City of La Quinta

General Plan Land Use Map

September, 2007



General Plan Map		
Case Number (GPA)	City Council Approval	Resolution Number
General Plan Update 2002	March 20, 2002	2002-44
03-089	May 6, 2003	2003-024
03-091	December 7, 2004	2004-150
03-092	July 1, 2003	2003-052
03-093	December 16, 2003	2003-125
03-094	March 16, 2004	2004-034
03-095	December 16, 2003	2003-129
03-096	January 6, 2004	2004-004
04-099	February 24, 2004	2004-032
04-101	August 3, 2007	2004-084
04-103	January 4, 2005	2005-004
05-104	June 21, 2005	2005-056
05-105	November 1, 2005	2005-085
05-108	November 21, 2006	2006-120

1. Official General Plan Adoption

City of La Quinta General Plan EIR
No Project Alternative Land Use Map
La Quinta, California

**Table V-4
No Project Alternative
Build Out Summary: City Limits Only**

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Very Low Density Residential	209.5	227.6	437.1		341	341
Low Density Residential	4,352.2	1,783.0	6,135.2	20,834	5,349	26,183
Medium Density Residential	957.4	145.2	1,102.6		871	871
Medium High Density Residential	315.2	205.3	520.5	2,655	1,848	4,503
High Density Residential	90.4	2.6	93.0		31	31
Total	5,924.7	2,363.7	8,288.4	23,489	8,440	31,929
				Existing SF	Potential SF	Total SF
Village Commercial	90.8	10.9	101.7	870,155	104,457	974,611
Regional Commercial	263.7	71.2	334.9	2,527,090	682,324	3,209,414
Community Commercial	49.3	45.1	94.4	472,452	432,202	904,654
Neighborhood Commercial	22.5	48.1	70.6	215,622	460,952	676,574
Tourist Commercial	210.4	150.4	360.8	2,016,305	1,441,313	3,457,619
Office Commercial	34.2	0.1	34.3	328,043	651	328,694
Commercial Park	38.4	20.3	58.6	367,691	194,296	561,987
Total	709.3	346.0	1,055.3	6,797,358	3,316,195	10,113,553
Major Community Facilities	179.1	2.8	181.9			
Parks and Recreation	611.3	87.2	698.5			
Golf Course	3,891.1	1,000.3	4,891.4			
Open Space	1,250.8	4,177.7	5,428.5			
Water	511.2	124.0	635.2			
Street Rights-of-Way	1,475.4	200.4	1,675.8			
Grand Total	14,552.9	8,302.1	22,855.0			

**Table V-5
No Project Alternative
Build Out Summary: Sphere-of-Influence**

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Estate Density Residential	136.9	1,160.3	1,297.2		580	580
Very Low Density Residential	37.9	887.5	925.4		888	888
Low Density Residential	235.8	4,003.5	4,239.3	801	6,005	6,806
Medium Density Residential	101.0	200.4	301.3		751	751
Medium High Density Residential	2.5	249.6	252.1		1,498	1,498
High Density Residential	23.6	135.5	159.0		1,422	1,422
Total	537.6	6,636.9	7,174.4	801	11,144	11,945
				Existing SF	Potential SF	Total SF
Commercial Retail	1.2	16.6	17.8	11,928	158,985	170,913
Commercial Tourist	0.0	119.9	119.9	-	1,149,107	1,149,107
Business Park	34.0	247.3	281.3	325,445	2,370,213	2,695,658
Community Center	7.5	112.12	119.6	71,617	1,074,468	1,146,086
Total	42.7	495.9	538.6	408,990.5	4,752,773.5	5,161,764.1
Public Facilities	28.2	40.2	68.4			
<i>Street Rights of Way</i>	320.05	0	320.1			
Total	348.2	40.2	388.4			
Grand Total	928.5	7,173.0	8,101.5			

**Table V-6
No Project Alternative
Build Out Summary: Planning Area Total**

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Very Low Density Residential	209.5	227.6	437.1	0	341	341
Low Density Residential	4,352.2	1,783.0	6,135.2	20,834	5,349	26,183
Medium Density Residential	957.4	145.2	1,102.6	0	871	871
Medium High Density Residential	315.2	205.3	520.5	2,655	1,848	4,503
High Density Residential	90.4	2.6	93.0	0	31	31
Estate Density Residential	136.9	1,160.3	1,297.2	0	580	580
Very Low Density Residential	37.9	887.5	925.4	0	888	888
Low Density Residential	235.8	4,003.5	4,239.3	801	6,005	6,806
Medium Density Residential	101.0	200.4	301.3	0	751	751
Medium High Density Residential	2.5	249.6	252.1	0	1,498	1,498
High Density Residential	23.6	135.5	159.0	0	1,422	1,422
Total	6,462.3	9,000.6	15,462.8	24,290	19,584	43,874
				Existing SF	Potential SF	Total SF
Village Commercial	90.8	10.9	101.7	870,155	104,457	974,611
Regional Commercial	263.7	71.2	334.9	2,527,090	682,324	3,209,414
Community Commercial	49.3	45.1	94.4	472,452	432,202	904,654
Neighborhood Commercial	22.5	48.1	70.6	215,622	460,952	676,574
Tourist Commercial	210.4	150.4	360.8	2,016,305	1,441,313	3,457,619
Office Commercial	34.2	0.1	34.3	328,043	651	328,694
Commercial Park	38.4	20.3	58.6	367,691	194,296	561,987
Commercial Retail	1.2	16.6	17.8	11,928	158,985	170,913
Commercial Tourist	0.0	119.9	119.9	0	1,149,107	1,149,107
Business Park	34.0	247.3	281.3	325,445	2,370,213	2,695,658
Community Center	7.5	112.1	119.6	71,617	1,074,468	1,146,086
Sub-Total	752.0	842.0	1,594.0	7,206,348.8	8,068,968.5	15,275,317.3
Major Community Facilities	179.1	2.8	181.9			
Parks and Recreation	611.3	87.2	698.5			
Golf Course	3,891.1	1,000.3	4,891.4			
Open Space	1,250.8	4,177.7	5,428.5			
Water	511.2	124.0	635.2			
Public Facilities	28.2	40.2	68.4			
Street Rights-of-Way	1,795.5	200.4	1,995.9			
Sub-Total	8,267.1	5,632.6	13,899.7			
Grand Total	15,481.4	15,475.2	30,956.5			

2. Alternative 1

This Alternative would reduce residential land use intensity, and commercial acreage, and represents a lower intensity option to the Preferred Alternative. Within the City limits, this alternative would remove approximately 49 acres of Tourist Commercial land in the SilverRock Resort, and replace it with Medium Density Residential. In addition, lands currently proposed for Low Density Residential development in the southwestern corner of the City would develop at Very Low Density Residential densities (2 units per acre).

Under this Alternative, almost all lands in the eastern Sphere area would be designated Very Low Density Residential, with the exception of lands on the west side of Harrison Street, which would remain Industrial and Commercial. Commercial lands on the east side of Monroe would be significantly reduced.

**Table V-7
Alternative 1
Build Out Summary: City Limits Only**

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Very Low Density Residential	0.0	339.2	339.2		509	509
Low Density Residential	4,171.2	1,336.7	5,507.9	20,834	4,010	24,844
Medium/High Density Residential	1,303.2	380.3	1,683.6	2,655	3,423	6,078
Total	5,474.4	2,056.2	7,530.6	23,489	7,942	31,431
				Existing SF	Potential SF	Total SF
General Commercial	383.2	186.4	569.6	3,671,883	1,786,305	5,458,188
Tourist Commercial	189.1	108.6	297.7	1,812,074	1,040,786	2,852,860
Village Commercial	77.4	12.9	90.2	741,328	123,207	864,535
Total	649.6	307.9	957.5	6,225,285	2,950,298	9,175,583
Major Community Facilities	238.0	160.0	398.0			
Open Space - Natural	2,242.7	5,233.3	7,476.0			
Open Space - Recreation	4,272.0	287.5	4,559.5			
Street Rights-of-Way	1,676.1	257.6	1,933.7			
Grand Total	14,552.9	8,302.5	22,855.3			

Table V-8
Alternative 1
Build Out Summary: Sphere-of-Influence

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Very Low Density Residential	527.2	6,844.5	7,371.7	801	10,267	11,068
Low Density Residential	27.5	71.9	99.4	0	216	216
Medium/High Density Residential	0	5.5	5.5	0	50	50
Total	554.7	6,922.0	7,476.7	801	10,532	11,333
				Existing SF	Potential SF	Total SF
General Commercial	25.6	185.6	211.2	245,298	1,778,761	2,024,059
Total	25.6	185.6	211.2	245,298	1,778,761	2,024,059
				Existing SF	Potential SF	Total SF
Industrial/Lgt. Mfg.	0	63.8	63.8	-	611,393	611,393
Total	0.0	63.8	63.8	-	611,393	611,393
Major Community Facilities	28.2	1.6	29.8			
Street Rights-of-Way	319.9	0	319.9			
Grand Total	928.4	7,173.0	8,101.4			

**Table V-9
Alternative 1
Build Out Summary: Planning Area Total**

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Very Low Density Residential	527.2	7,183.7	7,710.9	801	10,776	11,577
Low Density Residential	4,198.7	1,408.5	5,607.3	20,834	4,226	25,060
Medium/High Density Residential	1,303.2	385.9	1,689.1	2,655	3,473	6,128
Total	6,029.2	8,978.1	15,007.3	24,290	18,474	42,764
				Existing SF	Potential SF	Total SF
General Commercial	408.8	372.0	780.8	3,917,181	3,565,066	7,482,247
Tourist Commercial	189.1	108.6	297.7	1,812,074	1,040,786	2,852,860
Village Commercial	77.4	12.9	90.2	741,328	123,207	864,535
Total	675.2	493.5	1,168.7	6,470,583	4,729,059	11,199,643
				Existing SF	Potential SF	Total SF
Industrial/Lgt. Mfg.	0.0	63.8	63.8	-	611,393	611,393
Major Community Facilities	266.2	161.6	427.7			
Open Space - Natural	2,242.7	5,233.3	7,476.0			
Open Space - Recreation	4,272.0	287.5	4,559.5			
Street Rights-of-Way	1,996.0	257.6	2,253.7			
Grand Total	15,481.3	15,475.4	30,956.7			

This alternative would result in a reduction of 24% of total residential units, when compared to the Preferred Alternative. The potential Commercial and Industrial square footage would be comparable, with a reduction of 10%. Under this Alternative, Open Space lands would be somewhat reduced from the Preferred Alternative.

City of La Quinta

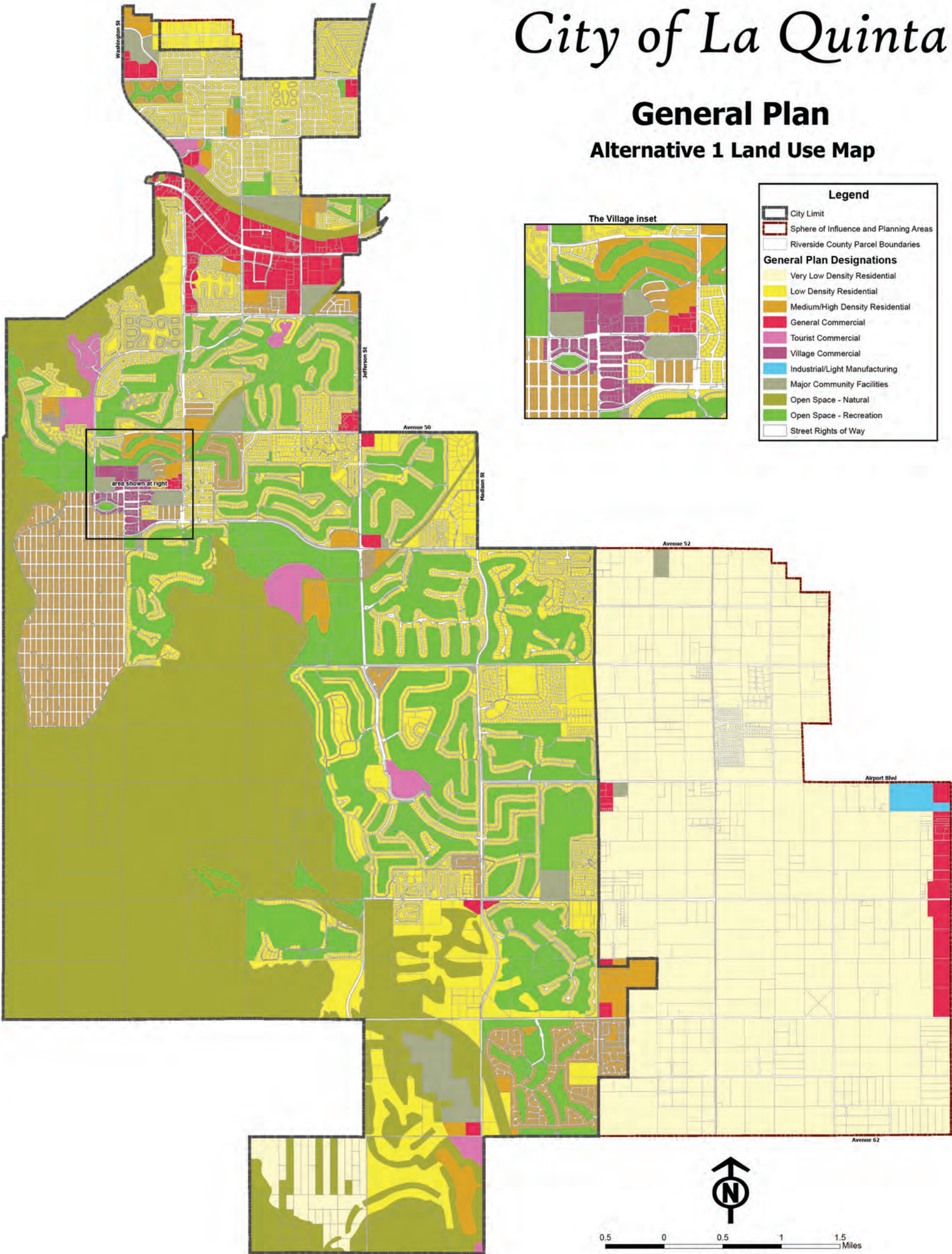
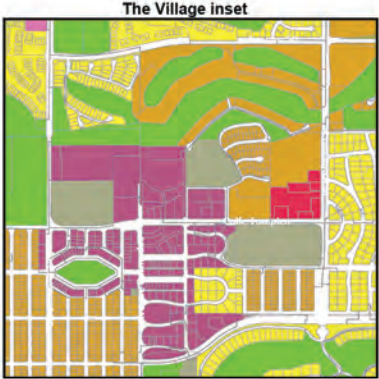
General Plan Alternative 1 Land Use Map

Legend

- City Limit
- Sphere of Influence and Planning Areas
- Riverside County Parcel Boundaries

General Plan Designations

- Very Low Density Residential
- Low Density Residential
- Medium/High Density Residential
- General Commercial
- Tourist Commercial
- Village Commercial
- Industrial/Light Manufacturing
- Major Community Facilities
- Open Space - Natural
- Open Space - Recreation
- Street Rights of Way



3. Alternative 2

This Alternative was developed to analyze the potential for concentrated population centers near commercial and public land uses, in order to reduce potential traffic and air quality impacts. Under this Alternative, lands immediately south of Saint Francis Catholic Church would be developed at Medium/High Density Residential intensities, as would all the lands in the north Sphere of Influence. In addition, Medium/High Density lands would occur in the eastern Sphere, adjacent to and west of the industrial and commercial lands along Harrison Street, and east of the commercial lands on the east side of Monroe. Medium/High Density Residential lands would also occur at the southeast corner of Airport Boulevard and Monroe. A 40 acre commercial center would also be developed at Airport Boulevard and Van Buren, in the Vista Santa Rosa area.

**Table V-10
Alternative 2
Build Out Summary: City Limits Only**

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Very Low Density Residential	0.0	0.0	0.0		-	0
Low Density Residential	4,171.2	1,636.9	5,808.1	20,834	4,911	25,745
Medium/High Density Residential	1,284.0	389.3	1,673.3	2,655	3,503	6,158
Total	5,455.3	2,026.2	7,481.4	23,489	8,414	31,903
				Existing SF	Potential SF	Total SF
General Commercial	383.2	186.4	569.6	3,671,883	1,786,305	5,458,188
Tourist Commercial	208.3	138.6	346.9	1,995,983	1,328,283	3,324,266
Village Commercial	77.4	12.9	90.2	741,328	123,207	864,535
Total	668.8	337.9	1,006.7	6,409,194	3,237,795	9,646,989
Major Community Facilities	238.0	160.0	398.0			
Open Space - Natural	2,242.7	5,233.3	7,476.0			
Open Space - Recreation	4,272.0	287.5	4,559.5			
Street Rights-of-Way	1,676.1	257.6	1,933.7			
Grand Total	14,552.9	8,302.5	22,855.3			

Table V-11
Alternative 2
Build Out Summary: Sphere-of-Influence

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Very Low Density Residential	0.0	0.0	0.0	0	-	801
Low Density Residential	483.3	6,161.9	6,645.2	801	18,486	19,287
Medium/High Density Residential	67.7	652.0	719.7	0	5,868	5,868
Total	550.9	6,813.9	7,364.8	801	24,354	25,956
				Existing SF	Potential SF	Total SF
General Commercial	29.4	293.7	323.0	281,461	2,814,376	3,095,837
Total	29.4	293.7	323.0	281,461	2,814,376	3,095,837
				Existing SF	Potential SF	Total SF
Industrial/Lgt. Mfg.	0	63.8	63.8	-	611,393	611,393
Total	0.0	63.8	63.8	-	611,393	611,393
Major Community Facilities	28.2	1.6	29.8			
Street Rights-of-Way	319.9	0	319.9			
Grand Total	928.4	7,173.0	8,101.4			

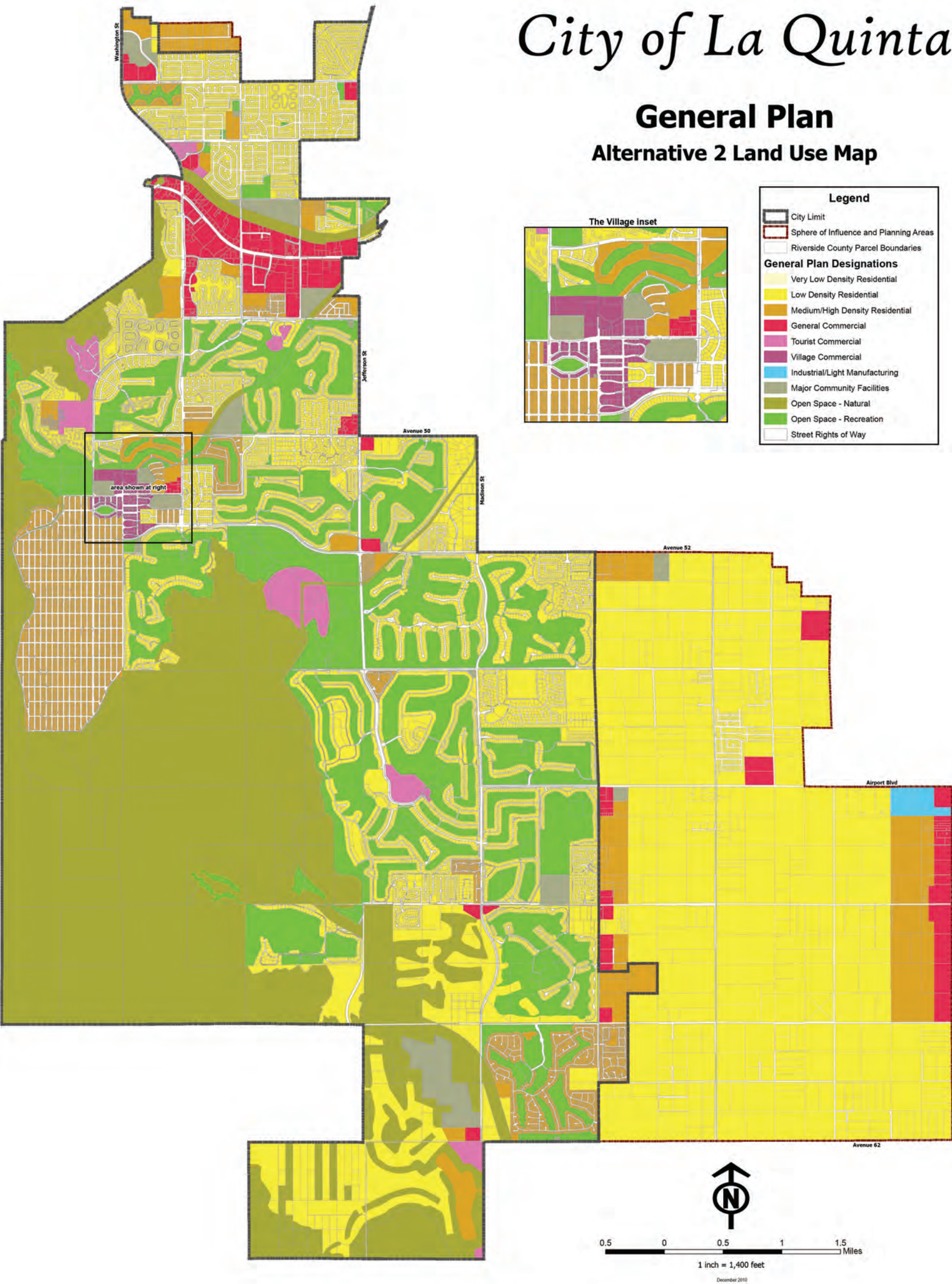
**Table V-12
Alternative 2
Build Out Summary: Planning Area Total**

Land Use Designation	Developed	Vacant	Total	Existing Units	Potential Units	Total Units
Very Low Density Residential	0.0	0.0	0.0	801	0	801
Low Density Residential	4,654.5	7,798.8	12,453.3	20,834	23,396	44,230
Medium/High Density Residential	1,351.7	1,041.3	2,393.0	2,655	9,371	12,026
Total	6,006.2	8,840.1	14,846.3	24,290	32,768	57,058
				Existing SF	Potential SF	Total SF
General Commercial	412.5	480.1	892.6	3,953,343	4,600,681	8,554,024
Tourist Commercial	208.3	138.6	346.9	1,995,983	1,328,283	3,324,266
Village Commercial	77.4	12.9	90.2	741,328	123,207	864,535
Total	698.2	631.5	1,329.7	6,690,654	6,052,171	12,742,826
Industrial/Lgt. Mfg.	0.0	63.8	63.8	-	611,393	611,393
Major Community Facilities	266.2	161.6	427.7			
Open Space - Natural	2,242.7	5,233.3	7,476.0			
Open Space - Recreation	4,272.0	287.5	4,559.5			
Street Rights-of-Way	1,996.0	257.6	2,253.7			
Grand Total	15,481.3	15,475.4	30,956.7			

Under this Alternative, residential units would increase by 7.5% over the Preferred Alternative. Commercial and industrial lands would be generally consistent with the Preferred Alternative, representing an increase of about 378,000 square feet. Open Space land use designations would be consistent with the Preferred Alternative.

City of La Quinta

General Plan Alternative 2 Land Use Map

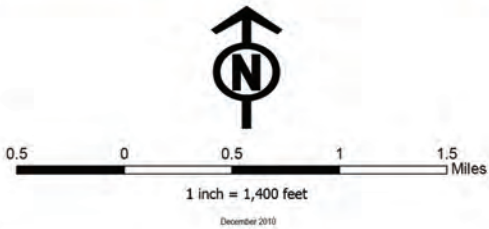


Legend

- City Limit
- Sphere of Influence and Planning Areas
- Riverside County Parcel Boundaries

General Plan Designations

- Very Low Density Residential
- Low Density Residential
- Medium/High Density Residential
- General Commercial
- Tourist Commercial
- Village Commercial
- Industrial/Light Manufacturing
- Major Community Facilities
- Open Space - Natural
- Open Space - Recreation
- Street Rights of Way



06.26.12

D. Alternative Projects Analysis

A. Aesthetics

The land within the City limits is mostly built out, and will experience redevelopment and infill development on vacant or underutilized parcels under all alternatives. The Sphere of Influence areas will see more significant changes over the next twenty five years, and convert from an agricultural and rural community to a more urban setting. The discussion below addresses aesthetic impacts according to each of the three project alternatives, including a “No Project Alternative”, “Alternative 1”, and a “Alternative 2.”

No Project Alternative

The No Project Alternative would result in continued land uses proposed under the existing La Quinta General Plan, for areas within the City limits, and the existing Riverside General Plan and Vista Santa Rosa Community Land Use Concept Plan for areas within the Sphere of Influence.

Build out of the No Project Alternative would allow for approximately 326 more residential units, and approximately 481,479 additional square feet of commercial space within the City Limits compared to the Preferred Alternative. The increase in units and square footage would occur over the entire City, and would not significantly change the character or building type of future development. More intense development will marginally increase light and glare impacts, as additional commercial will generate more lighting needed for parking lots and security purposes. The No Project Alternative will, therefore, likely cause slightly higher impacts on aesthetic resources in the City Limits than the Preferred Alternative.

Within the Sphere of Influence, the No Project Alternative would result in approximately 9,555 fewer residential units, and approximately 2,429,207 additional square feet of commercial space relative to the Preferred Alternative. The No Project Alternative provides for a wider variety of residential uses than the Preferred Alternative, ranging from Estate Density Residential to High Density Residential. Much of the Sphere of Influence, under the No Project Alternative, is designated as Estate and Very Low Density Residential. Unlike the Preferred Alternative, the No Project Alternative does not provide industrial uses. In regards to scenic vistas, the reduced amount of residential units and lack of industrial uses in the No Project Alternative may beneficially impact scenic vistas, insofar as a lower intensity of residential units will leave larger areas of viewshed. The higher amount of commercial square footage allowed under the No Project Alternative, however, could create greater impact on scenic vistas. Commercial structures tend to be higher and more bulky than residential structures, and such buildings may affect views of the surrounding environment.

In terms of visual character, the Sphere of Influence is currently rural and has an agrarian character. The No Project Alternative does provide lower intensity and density residential than the Preferred Alternative, but the higher amount of commercial uses may offset the difference and create a more urban environment.

In terms of light and glare, the lower density residential designations may help reduce impacts on light and glare. These impacts, however, may be offset by the higher amounts of commercial

square footage. As described above, commercial uses increase light and glare associated with parking lots and security.

In regards to scenic resources, such as trees, rock outcroppings and historic buildings within a state scenic highway, the No Project Alternative will have the same effect as the Preferred Alternative. Currently, there are no state scenic highways in either the City or the Sphere.

Overall, the No Project Alternative would have similar impacts, or slightly higher impacts, on aesthetic resources than the Preferred Alternative.

Alternative 1

Alternative 1 allows for the least amount of development to occur throughout the entire General Plan Update Planning Area. In terms of residential uses, Alternative 1 provides 172 fewer residential units in the City limits, and 10,167 fewer units in the Sphere of Influence than the Preferred Alternative. Alternative 1 also reduces commercial uses by 456,491 square feet in the City, and 708,498 square feet in the Sphere of Influence. Industrial land uses are similar between the two alternatives.

As discussed above, impacts on scenic vistas are related to number of buildings and structures that impede views of mountains, desert, and surrounding landscape. The Alternative 1 reduces the amount of buildings, and therefore will have less impact on the scenic vista than the Preferred Alternative. Visual character will also be preserved under Alternative 1, especially in the Sphere of Influence. The Alternative 1 provides for very low density residential throughout the Sphere of Influence, instead of low density residential proposed under the Preferred Alternative. This lower density residential will help protect the rural visual character that currently exists within the Sphere of Influence. Light and glare impacts will also be reduced under Alternative 1, specifically due to reduced amount of commercial uses proposed under Alternative 1.

In regards to scenic resources, such as trees, rock outcroppings, and historic buildings within a state scenic highway, the Less Intense Project Alternative will have a similar effect as the Preferred Alternative. Currently, there are no state scenic highways that run through La Quinta.

Overall, Alternative 1 creates the least amount of impacts on aesthetic resources over all other Alternatives.

Alternative 2

Alternative 2 would result in more intense development throughout the General Plan Update Planning Area, especially throughout the Sphere of Influence. Build out of Alternative 2 would allow for approximately 300 more residential units in the City Limits than what is proposed under the Preferred Alternative, and increase commercial uses by 14,915 square feet in the City.

In terms of its effect on scenic vistas, Alternative 2 will have a similar, or slightly increased, impact than the Preferred Alternative. Residential uses tend to be smaller scale buildings, so the increased residential will most likely have a limited effect on views of surrounding mountains and desert. Likewise, the increased amount of commercial square footage is expected to have

only limited impacts on nearby viewsheds. In terms of the visual character, La Quinta is predominantly a residential suburban community, and visual character is characterized by small scale residential buildings intermixed with larger commercial centers. The higher amounts of residential and commercial uses proposed under Alternative 2 will most likely cause similar, or slightly higher, impacts on the visual character compared to the Preferred Alternative. Impacts from light and glare will also be similar, or slightly higher under Alternative 2. The increased amount of commercial square footage may create a slight increase in glare and lighting associated with buildings, parking lots, and security lighting.

Alternative 2 would have the greatest impact on aesthetics within the Sphere of Influence, but these impacts will not be significantly increased over the Preferred Alternative. This Alternative allows for 3,655 additional residential units and 363,280 additional square feet of commercial uses over the Preferred Alternative. Alternative 2 allows for medium to high density residential in the Sphere of Influence, which is not allowed under the Preferred Alternative. This increased amount of residential and commercial development will affect the scenic vista by creating more structures and buildings that may impede views of local mountains, desert, and rural nature of the area.

The visual character will also be impacted by Alternative 2. The Sphere of Influence is currently rural, and more intense and higher density development will likely change the area into an urban environment. In regards to light and glare impacts, Alternative 2 would result in more lighting and glare than the Preferred Alternative. The greater amount of residential units and commercial square footage in the Sphere of Influence would result in more lighting from parking lots, commercial buildings, and residential buildings.

In regards to scenic resources, such as trees, rock outcroppings, and historic buildings within a state scenic highway, the More Intense Project Alternative will have a similar effect as the Preferred Alternative throughout both the City Limit and Sphere of Influence. Currently, there are no state scenic highways in either the City or the Sphere.

Overall, Alternative 2 results in a somewhat more significant impact on aesthetic resources than the Preferred Alternative.

B. Agricultural Resources

The Riverside County Important Farmland Map of 2008 highlights important agricultural lands throughout the region. These important agricultural lands are found throughout the General Plan Update Planning Area, and are most prevalent throughout the Sphere of Influence. The land uses proposed by all four Alternatives will allow urbanization to continue on important farmlands.

No Project Alternative

The No Project Alternative would result in new development regulated by the 2002 General Plan for areas within City Limits, the Riverside County General Plan in the north Sphere of Influence area, and the Vista Santa Rosa Land Use Plan in the eastern Sphere of Influence area. In the City, neither the Preferred Alternative nor the No Project Alternative provide agricultural land use designations, but do allow small farming and equestrian related uses in the Very Low Density

Residential zone. No new farming would be expected in the City under this alternative. Impacts on agricultural resources will be similar to those under the Preferred Alternative.

In the northern Sphere of Influence, the No Project Alternative would designate the area Medium Density Residential as opposed to the Low Density Residential designation proposed by the Preferred Alternative. Both land uses promote residential development. Currently, the northern Sphere of Influence is used for small nurseries, residential units, and vacant land. This area is surrounded by residential subdivisions, however, and is likely to develop in a similar fashion. Impacts related to agricultural conversion, therefore, would be similar to those created by the Preferred Alternative.

Within the eastern Sphere of Influence, land use designations proposed by the Vista Santa Rosa Community Plan include estate, very low and low density residential lands, with a community center and commercial uses along Airport Boulevard. This area has the potential to experience the greatest impact on agricultural resources. The eastern Sphere of Influence has 7,391 acres of land considered prime farmland, as well as 582 acres currently under Williamson Act contracts. The estate and very low density residential land uses would allow larger lots for equestrian and small agricultural production. The Vista Santa Rosa Community Plan, however, does not allow stand-alone agriculture. The No Project Alternative, therefore, would have slightly less impact on agricultural resources in the eastern Sphere of Influence than the Preferred Alternative.

Overall, the agricultural resource impacts are slightly less under the No Project Alternative than the Preferred Alternative, mainly due to limited agricultural activities allowed in the eastern Sphere of Influence under the Vista Santa Rosa Community Plan.

Less Intense Project Alternative

The Less Intense Project Alternative would reduce residential land use intensity, and commercial acreage throughout the General Plan Update Planning Area. Within the City, impacts on agricultural resources under the Less Intense Project Alternative would be the same as those under the Preferred Alternative.

In the northern Sphere of Influence, Alternative 1 provides the same land use designation as the Preferred Alternative. Therefore, impacts on agricultural resources under Alternative 1 are equivalent to the Preferred Alternative in the northern Sphere of Influence.

In the eastern Sphere of Influence, Alternative 1 designates all residential lands as Very Low Density Residential rather than the Low Density Residential designation provided under the Preferred Alternative. This lower density residential land use designation may potentially allow small agriculture and equestrian uses on larger lots conducive for small farming operations. Alternative 1 may potentially allow agricultural production on lands considered important for agriculture resources, and protect parcels that are currently under Williamson Act. Therefore, in terms of agricultural resources, Alternative 1 has slightly lower impacts on agricultural resources than the Preferred Alternative.

Overall, impacts on agriculture resources under Alternative 1 are slightly less than those under the Preferred Alternative.

Alternative 2

Alternative 2 allows for more intensive land uses throughout the General Plan Update Planning Area. Within the City, impacts on agricultural resources under the More Intense Project Alternative would be similar to those under the Preferred Alternative.

In the northern Sphere of Influence, Alternative 2 allows for higher intensity residential uses than provided for under the Preferred Alternative, however both alternatives would prohibit agriculture uses.

In the eastern Sphere of Influence, Alternative 2 designates some areas as higher intensity residential and more commercial land is designated, but it is otherwise very similar to the Preferred Alternative. Neither alternative allow agriculture.

Overall, impacts on agriculture resources under Alternative 2 are equivalent to those under the Preferred Alternative.

C. Air Quality

A comprehensive discussion on the potential air quality and GHG impacts for the Preferred Alternative can be found in Section III of this EIR. Also refer to the Air Quality and GHG Report included in Appendix B of this EIR for detailed demand projections and emission tables for each of the Alternatives. The discussion below compares the Preferred Alternative to the other proposed alternatives, and assesses the relative level of impact to air quality.

No Project Alternative

The No Project Alternative would result in build out within City limits pursuant to the 2002 General Plan. Under this Alternative the Sphere of Influence would build out as directed by the County's Vista Santa Rosa Land Use Concept Plan and the County's General Plan. A discussion of the air quality impacts associated with this level of development and operation are summarized below. Detailed demand and emission projections are included in the Air Quality and GHG Report.

Construction impacts for the No Project Alternative are comparable to the construction impacts projected for the Preferred Project Alternative. This is due to the fact that the No Project Alternative results in an intensification of development for commercial land uses, but a reduction in the total number of dwelling units. Although the total acreages of development for the Preferred Alternative and the No Project Alternative are the same, the No Project Alternative will result in approximately 9,228 fewer dwelling units, and an increase in the commercial square footage of about 2.9 million square feet. Therefore, it is assumed that construction activities will result in air quality emissions that are comparable to the emission projections for construction as set forth under the Preferred Alternative discussion, which is expected to exceed established daily thresholds for NO_x and ROG.

Under the No Project Alternative, natural gas and electricity demands will be higher in the City limits and lower in the Sphere of Influence relative to the Preferred Alternative. Energy and

natural gas demands within City limits will be slightly higher under the No Project Alternative compared to the Preferred Alternative. Under the No Project Alternative, within City limits annual demands are projected be 1,467,168,248 cubic feet for natural gas and 1,121,724,203 kilowatt hours for electricity. For the Sphere of Influence, the No Project Alternative is projected to generate an annual natural gas demand of 622,238,575 cubic feet and an electricity demand of 499,422,871 kwh, which are slightly less than demands for the Preferred Alternative. For the No Project Alternative energy and natural gas demands over the entire Planning Area are projected to be slightly less than demands projected for the Preferred Alternative.

The summary table below shows the total emission projections for the No Project Alternative from electricity, natural gas, area sources and moving sources for City limits, the Sphere of Influence and the overall La Quinta Planning Area.

As projected, air quality emissions for all criteria pollutants (CO, NO_x, SO_x, Particulates and ROG's) are projected to exceed established SCAQMD thresholds at operation of the No Project Alternative. Compared to the Preferred Alternative, the No Project Alternative is projected to result in comparable quantities of criteria pollutants from electricity, natural gas, area sources and moving sources.

Table V-13
Cumulative Daily Emissions No Project Alternative
(Lbs./day)

	Stationary Source Emissions			Moving Sources	Total Emissions	Threshold Criteria*
	Electricity	Natural Gas	Area Sources	Vehicles	Total Lbs./Day	Lbs./Day
City Limits						
CO	614.64	225.67	7,597.77	8,396	16,834.08	550
NOx	3,534.20	386.70	423.75	779	5,123.15	100
SOx	368.79	0.004	19.55	22	410.40	150
PM10	122.93	0.72	1,078.36	3,790	4,992.01	150
PM2.5	N/a	N/a	1,038.90	743	1,781.90	55
ROGs	30.73	29.18	4,427.08	947	5,433.50	75
Sphere of Influence						
CO	273.66	101.31	2,795.99	3,691	6,861.96	550
NOx	1,573.52	164.76	138.74	346	2,222.52	100
SOx	164.19	0.002	7.30	10	181.49	150
PM10	54.73	0.31	403.15	1,684	2,142.19	150
PM2.5	N/a	N/a	388.42	330	718.42	55
ROGs	13.68	12.38	1,653.17	414	2,092.73	75
Planning Area						
CO	888.30	326.98	10,393.76	12,087.00	23,696.04	550
NOx	5,107.72	551.46	562.49	1,124.00	7,345.67	100
SOx	532.98	0.01	26.84	32.06	591.89	150
PM10	177.66	1.03	1,481.50	5,474.00	7,134.19	150
PM2.5	N/a	N/a	1,427.32	1,073.00	2,500.32	55
ROGs	44.41	41.56	6,080.26	1,360.00	7,526.23	75
Source: Air Quality and GHG Report, prepared by Terra Nova, June 2012.						

All reasonable and feasible mitigation measures as set forth under the Preferred Alternative discussion would be applicable to the No Project Alternative.

Greenhouse Gas Emissions

The No Project Alternative will also result in the emission of GHG's through the combustion of fossil fuels during operation of vehicles, the generation of electricity at power plants, combustion of natural gas, and the transportation of water. GHG emission projections for the No Project Alternative are set forth in the table below and are comparable to the Preferred Alternative.

Table V-14
GHG Emissions for the No Project Alternative

(million metric tons)					
	Electricity	Natural Gas	Moving Sources	Water Transport	Total
City Limits	0.492	0.080	0.426	0.0108	1.010
Sphere of Influence	0.219	0.034	0.189	0.004	0.446
Planning Area	0.711	0.114	0.615	0.015	1.456

See Appendix D of the Air Quality and GHG Report for detailed tables.

As with the Preferred Alternative, implementation of the Greenhouse Gas Reduction Plan under the No Project Alternative would be sufficient mitigation to reduce potential impacts from greenhouse gases to levels below significance. In the event that lands within the Sphere of Influence were annexed into La Quinta, compliance with the GHG Reduction Plan would be required. Under County jurisdiction lands within the Sphere of Influence have the potential to result in significant impacts from the emission of greenhouse gases.

Alternative 1

Construction impacts for Alternative 1 are expected to be slightly less than construction impacts projected for the Preferred Alternative. This is because Alternative 1 consists of less dense land use development compared to the Preferred Alternative. Although the total acreages of vacant land to be developed are the same under the two Alternatives, Alternative 1 will result in approximately 10,399 fewer dwelling units, and a reduction of 1,164,989 square feet of commercial space compared to the Preferred Alternative. Construction activities under Alternative 1 will result in air quality emissions that are slightly reduced compared to the emission projections for construction as set forth under the Preferred Alternative. Nonetheless, established daily thresholds for NO_x, ROG, and PM₁₀ are expected to be exceeded from construction of Alternative 1.

Under this Alternative, natural gas and electricity demands will be reduced compared to the Preferred Alternative. Within City limits, annual demands for Alternative 1 are projected to be 1,402,741,087 cubic feet for natural gas and 1,059,057,498 kilowatt hours for electricity. For the Sphere of Influence, Alternative 1 is projected to generate an annual natural gas demand of 469,980,612 cubic feet and an electricity demand of 342,918,007 kwh, which are less than demand projections for the Preferred Alternative. Throughout the Planning Area, natural gas demands are projected to be 1,872,721,699 cubic feet per year under Alternative 1, which is substantially lower than the 2,238,326,502 cubic feet projected for the Preferred Alternative. Similarly, the electricity demand for the entire Planning Area, under Alternative 1, is projected to be 1,401,975,505 kilowatt hours, which is a 243,170,095 kilowatt hour decrease from the 1,645,145,600 kilowatt hour demand projected for the Preferred Alternative.

The summary table below shows the total emission projections for Alternative 1 from electricity, natural gas, area sources and moving sources for City limits, the Sphere of Influence and the overall La Quinta Planning Area.

Table V-15
Cumulative Daily Emissions Alternative 1
(Lbs./day)

	Stationary Source Emissions			Moving Emissions	Total Emissions	Threshold Criteria*
	Electricity	Natural Gas	Area Sources	Vehicles	Total Lbs./Day	Lbs./Day
City Limits						
CO	580.31	212.59	7,463.15	8,308	16,564.05	550
NOx	3,336.77	369.28	415.16	773	4,893.71	100
SOx	348.18	0.004	19.24	22	389.42	150
PM10	116.06	0.69	1,061.42	3,835	5,013.17	150
PM2.5	N/a	N/a	1,022.56	751	1,773.56	55
ROGs	29.02	27.90	4,348.82	931	5,336.24	75
Sphere of Influence						
CO	187.90	68.41	2,750.01	3,430	6,435.83	550
NOx	1,080.43	123.34	169.90	324	1,697.17	100
SOx	112.74	0.001	6.96	10	129.71	150
PM10	37.58	0.23	383.08	1,717	2,137.90	150
PM2.5	N/a	N/a	369.05	335	704.05	55
ROGs	9.40	9.35	1,587.75	361	1,967.49	75
Planning Area						
CO	768.21	281.00	10,213.16	11,737.50	22,999.87	550
NOx	4,417.19	492.62	585.06	1,096.00	6,590.88	100
SOx	460.92	0.01	26.20	32.00	519.13	150
PM10	153.64	0.92	1,444.50	5,552.00	7,151.07	150
PM2.5	N/a	N/a	1,391.60	1,086.00	2,477.60	55
ROGs	38.41	37.25	5,936.57	1,291.50	7,303.73	75
Source: Air Quality and GHG Report, prepared by Terra Nova, June 2012.						

Air quality emissions for all criteria pollutants (CO, NOx, SOx, Particulates and ROG's) are projected to exceed established SCAQMD thresholds at build out of Alternative 1. Compared to the Preferred Alternative, the Less Intense Project Alternative is projected to result in reduced emission of criteria pollutants from electricity, natural gas, area sources and moving sources. Nonetheless, all thresholds criteria will be exceeded and impacts to air quality have the potential to be significant.

All reasonable and feasible mitigation measures as set forth under the Preferred Alternative discussion would be applied to Alternative 1.

Greenhouse Gas Emissions

Alternative 1 will result in the emission of greenhouse gases through the combustion of fossil fuels during operation of vehicles, the generation of electricity at power plants, combustion of

natural gas, and the transportation of water. GHG emission projections for Alternative 1 are set forth in the table below and are slightly reduced compared to the Preferred Alternative.

**Table V-16
GHG Emissions for Alternative 1**

(million metric tons)					
	Electricity	Natural Gas	Moving Sources	Water Transport	Total
City Limits	0.465	0.077	0.430	0.011	0.982
Sphere of Influence	0.150	0.026	0.190	0.004	0.370
Planning Area	0.615	0.102	0.620	0.015	1.352

Source: Air Quality and GHG Report, prepared by Terra Nova, June 2012.

As with the Preferred Alternative, implementation of the Greenhouse Gas Reduction Plan under Alternative 1 would be sufficient mitigation to reduce potential impacts from greenhouse gases to levels below significance. In the event that lands within the Sphere of Influence were annexed into La Quinta, compliance with the GHG Reduction Plan would be required. Under County jurisdiction lands within the Sphere of Influence have the potential to result in significant impacts from the emission of greenhouse gases.

Alternative 2

This Alternative is expected to result in the emission of slightly more pollutants compared to emission projections for the Preferred Alternative. This is because Alternative 2 consists of more dense land use development compared to the Preferred Alternative. Although the total acreages of vacant land to be developed are the same under the two Alternatives, Alternative 2 will result in 3,955 more residential units, and an additional 378,195 square feet of commercial compared to the Preferred Alternative. Construction activities for Alternative 2 will result in emissions that are slightly elevated in comparison to the emission projections for construction set forth under the Preferred Alternative. Established daily thresholds for NO_x, ROG, PM₁₀, and PM_{2.5} are expected to be exceeded from construction of land uses proposed in Alternative 2.

Under Alternative 2 natural gas and electricity demands will be increased compared to the Preferred Alternative. Annual demands for Alternative 2 within City limits are projected to be 1,441,566,735 cubic feet for natural gas and 1,094,274,318 kilowatt hours for electricity; and for the Sphere of Influence natural gas demands are projected to be 929,123,261 cubic feet and electricity demands are projected to be 637,122,426 kwh. Throughout the Planning Area natural gas demands are projected to be 2,370,689,995 cubic feet per year under Alternative 2, which is 132,363,493 cubic feet more than the 2,238,326,502 cubic feet projected for the Preferred Alternative. Similarly, the electricity demand for the entire Planning Area under Alternative 2 is projected to be 1,731,396,744 kilowatt hours, which is a 86,251,144 kilowatt hour increase relative to the 1,645,145,600 kilowatt hour demand projected for the Preferred Alternative.

Air quality emissions for all criteria pollutants (CO, NO_x, SO_x, Particulates and ROG's) are projected to exceed established SCAQMD thresholds at operation of Alternative 2. Compared to the Preferred Alternative, Alternative 2 is projected to result in a similar level of emissions

within the City limits, and increased emissions of criteria pollutants from electricity, natural gas, area sources and moving sources within the Sphere of Influence. As seen in the Table below, all threshold criteria will be exceeded and impacts to air quality have the potential to be significant under Alternative 2.

Table V-17
Cumulative Daily Emissions Alternative 2
(Lbs./day)

	Stationary Source Emissions			Moving Sources	Total Emissions	Threshold Criteria*
	Electricity	Natural Gas	Area Sources	Vehicles	Total Lbs./Day	Lbs./Day
City Limits						
CO	599.60	219.87	7,574.10	8,573	16,966.50	550
NOx	3,447.71	379.69	419.67	798	5,044.94	100
SOx	359.76	0.004	19.52	23	402.34	150
PM10	119.92	0.71	1,077.36	3,957	5,154.99	150
PM2.5	N/a	N/a	1,037.92	775	1,812.97	55
ROGs	29.98	28.67	4,416.03	948	5,423.05	75
Sphere of Influence						
CO	349.11	125.61	5,962.74	5,418	11,855.21	550
NOx	2,007.39	242.53	342.07	502	3,093.91	100
SOx	209.47	0.003	15.38	15	239.92	150
PM10	69.82	0.46	849.35	2,588	3,507.29	150
PM2.5	N/a	N/a	818.16	506	1,324.24	55
ROGs	17.46	18.48	3,453.99	583	4,072.87	75
Planning Area						
CO	948.71	345.48	13,536.84	13,990.68	28,821.70	550
NOx	5,455.10	622.22	761.74	1,299.79	8,138.85	100
SOx	569.23	0.01	34.90	38.13	642.26	150
PM10	189.74	1.17	1,926.71	6,544.66	8,662.28	150
PM2.5	N/a	N/a	1,856.08	1,281.13	3,137.21	55
ROGs	47.44	47.15	7,870.02	1,531.32	9,495.92	75

Source: Air Quality and GHG Report, prepared by Terra Nova, June 2012.

As with the Preferred Alternative, all reasonable and feasible mitigation measures will be applied to Alternative 2 in order to limit emissions from operation.

Greenhouse Gas Emissions

Alternative 2 will result in the emission of greenhouse gases through the combustion of fossil fuels during operation of vehicles, the generation of electricity at power plants, combustion of natural gas, and the transportation of water. GHG emission projections for Alternative 2 are set forth in the table below and are slightly greater than GHG emission projections for the Preferred Alternative.

Table V-18
GHG Emissions for Alternative 2

	(million metric tons)				
	Electricity	Natural Gas	Moving Sources	Water Transport	Total
City Limits	0.480	0.079	0.443	0.011	1.013
Sphere of Influence	0.280	0.051	0.289	0.009	0.628
Planning Area	0.760	0.130	0.732	0.019	1.641

Source: Air Quality and GHG Report, prepared by Terra Nova, June 2012.

As with the Preferred Alternative implementation of the Greenhouse Gas Reduction Plan under this Alternative would be sufficient mitigation to reduce potential impacts from greenhouse gases to levels below significance. In the event that lands within the Sphere of Influence were annexed into La Quinta, compliance with the GHG Reduction Plan would be required. Under County jurisdiction lands within the Sphere of Influence have the potential to result in significant impacts from the emission of greenhouse gases.

D. Biological Resources

The potential impacts to biological resources are primarily associated with land conversion and proposed development that results in the loss of habitat. Although the four Alternatives propose various amounts of growth and types of development, all Alternatives result in the development of approximately 30,957 acres throughout the Planning Area. Development and urbanization of these lands has the potential to result in impacts to biological resources, such as loss or degradation of habitat, incidental take of listed species, and impacts to common and sensitive species. The following discussion analyzes potential impacts to biological resources that may result from implementation of each of the project alternatives.

As noted in Section III-D impacts to biological resources are addressed in the Coachella Valley Multiple-Species Habitat Conservation Plan (MSHCP), which provides mitigation for incidental take resulting from individual development projects. Mitigation includes payment of per-acre mitigation fees for all new development within the MSHCP planning area, which will apply regardless of the alternative implemented.

All four alternatives, including the No Project Alternative, Alternative 2, Alternative 1, and the Preferred Alternative, provide land use designations that allow for continued urbanization throughout the Planning Area. Despite the fact that some alternatives propose more intense land uses over others, each of the four alternatives will facilitate development on land that may contain sensitive biological resources. Mitigation measures, comparable to those listed in Section III-D will be required for all new development in order to protect biological resources. These mitigation measures, along with State and Federal regulations pertaining to biological resources, as well as the CV MSHCP are expected to reduce impacts to biological resources to less than significant levels for all Alternatives.

E. Cultural Resources

The La Quinta General Plan Update Planning Area is rich in cultural resources. Archaeological discoveries have uncovered remnants from the prehistoric Cahuilla tribe. Future development and construction activities will continue to reveal buried cultural resources.

Impacts on cultural resources, including historical, archaeological, and paleontological resources, within the General Plan Update Planning Area, will be caused by new development on lands considered culturally sensitive. Section III-E of this EIR describes lands located within the Planning Area that are considered highly sensitive in terms of paleontological sensitivity. These high sensitivity areas include the entire Sphere of Influence, and select areas within the City Limit. It should be noted that portions of the City and eastern Sphere of Influence remain unsurveyed. These areas may contain historic and archaeological resources, and new development projects in these areas will require cultural surveys.

All four alternatives, including the No Project Alternative, Alternative 1, Alternative 2, and the Preferred Alternative, provide land use designations that allow for continued urbanization throughout the Planning Area. Despite the fact that some alternatives propose more intense land uses over others, each of the four alternatives will facilitate development on culturally sensitive lands. There is not one alternative that provides open space or conservation areas over lands considered culturally significant. Impacts to cultural resources, therefore, are expected to be comparable under each alternative.

Mitigation measures, such those in Section III-E., will be required for all new development in order to protect cultural resources. These mitigation measures, along with State and Federal regulations pertaining to cultural resources, are expected to create less than significant impacts on cultural resources.

F. Geology & Soils

The potential impacts of geology and soils are primarily associated with the region's seismic activity, which is relative to the number of people impacted by these risks. The four Alternatives propose various amounts of growth and types of development, which increase or decrease impacts related to seismic hazards. The following discussion analyzes potential impacts of geology and soils that may result from implementation of each of the project alternatives.

No Project Alternative

Build out under the No Project Alternative would result in an increased number of residential units and commercial square footage relative to the Preferred Alternative within the City Limits. The No Project Alternative will expose a greater number of people, dwelling units, and buildings to seismic events and related impacts such as liquefaction, and seismically induced slope instability and inundation compared to the Preferred Alternative. Similarly, a greater number of people and structures will be exposed to impacts associated with soil conditions, including settlement and ground subsidence, rockfall from hillsides, soils expansion, and aerially deposited dust and particulate matter.

For the Sphere of Influence, the No Project Alternative reduces the amount of residential units by almost half compared to the Preferred Alternative. This significantly reduces the number of residents susceptible to seismic hazards and exposure to impacts from soil conditions. As such, the number of people requiring assistance during emergencies and evacuations will be substantially reduced under the No Project Alternative. However, the No Project Alternative will result in an additional 2.43 million square feet of commercial development within the Sphere over what is proposed for the Preferred Alternative. As such, the No Project Alternative has the potential to result in greater impacts to commercial development in the Sphere due to seismic activity.

The overall Planning Area under the No Project Alternative is similar to the Preferred Alternative in regards to impacts associated with geology and soils. However, 23,348 fewer residents, 9,229 fewer dwelling units, and an additional 2.91 million square feet of commercial development have the potential to be impacted under the No Project Alternative compared to the Preferred Alternative.

Alternative 1

Build out of Alternative 1 will result in a slight decrease in the number of residential units (172) and commercial square footage (456,491) relative to the Preferred Alternative, within the City Limits. Alternative 1 will expose slightly fewer people, dwelling units, and buildings to seismic events and related impacts such as liquefaction, and seismically induced slope instability and inundation compared to the Preferred Alternative. Similarly, slightly fewer people and structures will be exposed to impacts associated with soil conditions, including settlement and ground subsidence, rockfall from hillsides, soils expansion, and aerially deposited dust and particulate matter under Alternative 1 relative to the Preferred Alternative.

For the Sphere of Influence, Alternative 1 reduces the number of residential units by almost half compared to the Preferred Alternative. This significantly reduces the number of residents susceptible to seismic hazards and exposure to impacts from soil conditions. As such, the number of people requiring assistance during an emergency or evacuation will be reduced by 25,724 people under Alternative 1. Similarly, Alternative 1 will result in a decrease of approximately 708,498 square feet of commercial development within the Sphere over what is proposed for the Preferred Alternative. As such, Alternative 1 will result in fewer impacts to commercial development in the Sphere due to seismic activity relative to the Preferred Alternative.

The overall Planning Area under Alternative 1 is similar to the Preferred Alternative in regards to impacts associated with geology and soils. However, 26,159 fewer residents, 10,339 fewer dwelling units, and 1.16 million square feet less of commercial development have the potential to be impacted under Alternative 1 compared to the Preferred Alternative.

Alternative 2

Build out of Alternative 2 will result in a slight increase in the number of residential units (300) and a slight increase in the commercial square footage (14,915) relative to the Preferred Alternative, within the City Limits. Alternative 2 will expose slightly more people, dwelling units, and commercial square footage to seismic events and related impacts such as liquefaction, and seismically induced slope instability and inundation compared to the Preferred Alternative.

Similarly, slightly more people will be exposed to impacts associated with soil conditions, including settlement and ground subsidence, rockfall from hillsides, soils expansion, and aerially deposited dust and particulate matter under Alternative 2 relative to the Preferred Alternative.

For the Sphere of Influence, Alternative 2 increases the number of residential units by 3,655 units compared to the Preferred Alternative, which increases the number of residents susceptible to seismic hazards and exposure to impacts from soil conditions. As such, the number of people requiring assistance during an emergency or evacuation will increase by 9,246 people under Alternative 2. Similarly, Alternative 2 will result in an increase of approximately 363,280 square feet of commercial development within the Sphere over what is proposed for the Preferred Alternative. As such, Alternative 2 has the potential to result in slightly greater impacts to commercial development in the Sphere due to seismic activity relative to the Preferred Alternative.

The overall Planning Area under Alternative 2 is similar to the Preferred Alternative in regards to impacts associated with geology and soils. However, an additional 10,005 residents, 3,955 dwelling units, and 378,195 square feet of commercial development have the potential to be impacted under Alternative 2 compared to the Preferred Alternative.

G. Hazards & Hazardous Materials

The impacts related to hazards and hazardous materials are relative to the number of people impacted by these risks. The four differing Alternatives produce differing amounts of growth and types of development, which may increase or decrease impacts related to hazards and hazardous materials.

No Project Alternative

Build out under the No Project Alternative would result in a slightly higher number of residential units and commercial square footage than the Preferred Alternative within the City Limits. This would allow for a slight increase in population susceptible to hazards and hazardous materials, as well as increased volumes of hazardous materials being generated by both residential and commercial land uses.

In the Sphere of Influence, however, the No Project Alternative reduces the number of residential units by almost half of what is proposed by the Preferred Alternative. This significantly reduces the amount of residents susceptible to hazards and hazardous materials, and reduces the number of people needing assistance during emergencies and evacuations. The reduced population, however, is offset by the increased commercial uses proposed under the No Project Alternative. Commercial land uses are almost double that proposed by the Preferred Alternative. Commercial land uses typically generate higher volumes of hazardous materials than residential uses, and also increase the amount of transport of these materials through the streets of the community. The No Project Alternative, however, does not propose industrial uses. Industrial and light manufacturing uses tend to increase the risks associated with hazardous materials. Overall, the No Project Alternative is similar in regards to impacts associated with hazards and hazardous materials to the Preferred Alternative.

Alternative 1

Implementation of Alternative 1 would result in slightly fewer residential units and less commercial square footage in the City than proposed under the Preferred Alternative. This would slightly reduce impacts associated with hazards and hazardous materials. Alternative 1 would also significantly reduce the amount of residential units over the Preferred Alternative in the Sphere of Influence. Commercial uses are also slightly reduced under Alternative 1. Overall, Alternative 1 would result in the lowest level of impact associated with hazards and hazardous materials, of the Preferred Alternative and the two other Alternatives.

Alternative 2

Alternative 2 results in a slight increase in residential units and commercial uses over the Preferred Alternative within the City limits. For the most part, impacts related to hazards and hazardous waste would be similar under both Alternatives within the City limits. Alternative 2, however significantly increases both residential and commercial uses in the Sphere of Influence over the Preferred Alternative. Industrial uses proposed for the Sphere Influence, are nearly the same between the two Alternatives. Therefore, this increase in residential and commercial uses in the Sphere of Influence will increase the number of people at risk from hazardous spills and accidents, and increase the volume of hazardous materials in the area. Alternative 2, therefore, would have more significant impacts related to hazards and hazardous materials, than the Preferred Alternative. Regulations and mitigation measures would be implemented in the same manner as for the Preferred Alternative, however, and impacts would remain less than significant.

H. Hydrology

The potential impacts to hydrology and drainage are primarily associated with land use conversion and proposed development that results in a loss of, or reduction to permeability. Although the four Alternatives propose various amounts of growth and types of development, all Alternatives result in the development of approximately 30,957 acres throughout the Planning Area. Development and urbanization of these lands has the potential to result in impacts to hydrology due to paving of roads and sidewalks and impermeable building foundations. Water that would have been absorbed into the ground will instead runoff to downstream areas, without mitigation.

As noted in Section III-H the regional hydrology and drainage pattern, including flood control structures, are managed and maintained by the Riverside County Flood Control and Water Conservation District (RCFC) and CVWD.

All four alternatives, including the No Project Alternative, Alternative 1, Alternative 2, and the Preferred Alternative, provide land use designations that allow for continued urbanization throughout the Planning Area. As discussed below some alternatives propose more intense land uses over others, which results in varying impacts to hydrology. Mitigation measures, comparable to those listed in Section III-H will be required for each of the project alternatives. These mitigation measures, along with local and regional flood control district policies and regulations, are expected to reduce impacts to hydrology to less than significant levels for all Alternatives.

No Project Alternative

Implementation of the No Project Alternative has the potential to result in similar hydraulic impacts within City limits as described in Section III under the Preferred Alternative analysis. The overall Planning Area of the No Project Alternative will result in 9,229 fewer residential dwelling units, but an additional 2.9 million square feet of commercial relative to the Preferred Alternative. The No Project Alternative sets forth substantially fewer residential units within the Sphere compared to the Preferred Alternative. As such, impacts to hydrology within the Sphere will likely be somewhat reduced compared to the Preferred Alternative. As with the Preferred Alternative, the No Project Alternative impacts to hydrology will primarily result from the development of impermeable surfaces on currently vacant or undeveloped lands within the Sphere.

Alternative 1

Implementation of Alternative 1 has the potential to result in similar hydraulic impacts within City limits as described in Section III under the Preferred Alternative analysis. However, due to the reduced level of development proposed under Alternative 1, impacts from flooding are expected to be somewhat reduced compared to the Preferred Alternative. The overall Planning Area of Alternative 1 will result in 10,399 fewer residential dwelling units, and 1.16 million square feet less of commercial space relative to the Preferred Alternative.

Alternative 1 sets forth substantially fewer residential units within the Sphere compared to the Preferred Alternative. As such, impacts to hydrology within the Sphere will likely be reduced compared to the Preferred Alternative. Accordingly, Alternative 1 will have reduced runoff and flooding, due to the reduced amount of impermeable surfaces that will be developed relative to the Preferred Alternative. As with the Preferred Alternative, hydraulic impacts from Alternative 1 will primarily result from the development of impermeable surfaces on currently vacant or undeveloped lands within the Sphere.

Alternative 2

At build out of Alternative 2 impacts to hydrology within City limits will be comparable to those impacts described in Section III under the Preferred Alternative analysis. However, due to the increased level of development proposed under Alternative 2, impacts from flooding are expected to be somewhat increased compared to the Preferred Alternative. The overall Planning Area of Alternative 2 will result in 3,955 additional residential dwelling units, and an additional 378,195 square feet of commercial space relative to the Preferred Alternative. Alternative 2 sets forth 3,655 more residential units within the Sphere compared to the Preferred Alternative. As such, impacts to hydrology within the Sphere will likely be increased compared to the Preferred Alternative. Accordingly, Alternative 2 will result in increased impacts from runoff and flooding, due to the additional impermeable surfaces that will be developed relative to the Preferred Alternative. As with the Preferred Alternative, hydraulic impacts from Alternative 2 will primarily result from the development of impermeable surfaces on currently vacant or undeveloped lands within the Sphere.

I. Land Use and Planning

The mix of uses proposed under each of the three Alternatives is analyzed relative to the Preferred Alternative. Briefly, the Preferred Alternative is not expected to divide an established community or conflict with the CV MSHCP.

As proposed, the Preferred Alternative is consistent with established land use plans for land use designations proposed within City limits, but is somewhat divergent from the County's land use plan for the Sphere of Influence.

As described in detail in the Land Use and Planning discussion in Section III, land use designations proposed for the Sphere of Influence have the potential to result in significant impacts without mitigation. The City has studied the land use pattern in the Sphere, and has considered several potential annexation proposals in the past. These proposals included analyses relating to the availability and cost of the provision of services in the Sphere. These analyses found that in the eastern Sphere in particular, lands have been encumbered by the County as collateral for a regional bond issue. As a result, there will be no property tax generation to the City from these lands for a number of years. The fiscal analysis concluded that the annexation of property in the Sphere would have a negative fiscal impact on the City. Under all the proposed alternatives, the potential fiscal impact to the City could be significant.

The General Plan includes policies that require both the preparation of fiscal impact analyses for annexation proposals, and a Development Agreement in association with annexation. The Development Agreement would establish the parameters for development, and would include mitigation fee payments for projects that are fiscally negative for the City. These Development Agreements would eliminate the potential fiscal impacts to the City under all alternatives.

No Project Alternative

The No Project Alternative includes a wide range of land use designations that have been consolidated into a just a few land uses for the Preferred Alternative.

Build out of the No Project Alternative has the potential to result in the development of 43,875 dwelling units, which is 9,229 fewer dwelling units, or a 17% reduction compared to the Preferred Alternative. This is primarily due to the differences in the allowable dwelling unit densities for the Sphere of Influence, which nearly doubles for the Preferred Alternative compared to the No Project Alternative.

Under the No Project Alternative, 15.28 million square feet of commercial land uses would be developed throughout the Planning Area, which is 2.9 million square feet more than the Preferred Alternative. For comparison purposes, the No Project Alternative proposes slightly more commercial development within City limits and nearly doubles the proposed commercial development within the Sphere of Influence compared to the Preferred Alternative. The exception being that the Preferred Alternative includes 611,408 square feet of industrial/light manufacturing land use, whereas the No Project Alternative does not include any industrial land use designation.

The land uses proposed under the No Project Alternative complement the existing land uses and will not divide an established community. Proposed land uses for the No Project Alternative in City limits are very similar to land uses proposed under the Preferred Alternative. Unlike the Preferred Alternative, the No Project Alternative proposes land use designations for the Sphere of Influence that are consistent with the County's land use plan, including the Vista Santa Rosa Concept. In addition, the No Project Alternative does not conflict with the established CVMSHCP. Therefore, the No Project Alternative will result in less than significant impacts to land use.

Alternative 1

When compared to the Preferred Alternative, Alternative 1 proposes 10,339 fewer dwelling units, and 26,159 fewer residents would have the potential to be impacted by surrounding land uses. The reduction in dwelling units under Alternative 1, relative to the Preferred Alternative, is due to the different dwelling unit intensities proposed for the Sphere of Influence. The residential land use for the Sphere of Influence under Alternative 1 is primarily very low density residential, which only allows up to two dwelling units per acre, compared to the 4 dwelling units per acre allowed under the Preferred Alternative. Alternative 1 would result in a reduction of 19% of total residential units, when compared to the Preferred Alternative.

Alternative 1 also proposes a total of 11.2 million square feet of commercial development. The level of development under this scenario is approximately 1.2 million square feet less than the commercial development proposed under the Preferred Alternative. The potential Commercial and Industrial square footage represents a reduction of 9.4% compared to the Preferred Alternative.

Land uses proposed under Alternative 1 are consistent with those set forth under the Proposed Alternative, but in less dense intensities. Potential land use impacts under Alternative 1 are expected to be less than significant within City limits and the Sphere of Influence. Land uses proposed under Alternative 1, within City limits, are consistent with the 2002 General Plan land use designations. In addition, land use designations proposed for the Sphere of Influence, under Alternative 1 are consistent with the County's land use plan including the Vista Santa Rosa Concept.

The land uses proposed under Alternative 1 complement existing land uses and would not divide an established community. Proposed land uses for Alternative 1 are consistent with existing land use plans and policies, and impacts are expected to be less than significant for proposed development within City limits and the Sphere of Influence. In addition, Alternative 1 does not conflict with the established CVMSHCP. Therefore, under Alternative 1 impacts to land use and planning are expected to be less than significant.

Alternative 2

Under this Alternative, the Planning Area will experience a greater intensity of development compared to the Preferred Alternative. Alternative 2 would allow for the development of up to 57,058 dwelling units, which could accommodate a population size of 144,357 residents at build out. When compared to the Preferred Alternative, Alternative 2 proposes 3,955 additional dwelling units and approximately 10,005 additional residents. Under Alternative 2, a greater

number of residents, a 7% increase over the Preferred Alternative, would have the potential to be impacted by surrounding land uses.

Alternative 2 has the potential to result in the development of up to 12.74 million square feet of commercial, which is an increase of 3% compared to the Preferred Alternative. Proposed commercial development for Alternative 2 complements the existing commercial land uses and is generally consistent with the Preferred Alternative.

As with the Preferred Alternative, potential land use impacts under Alternative 2 are expected to be less than significant within City limits and have the potential to result in significant impacts within the Sphere of Influence. Implementation of a master plan for the Sphere of Influence as described in Section III of this EIR, will reduce potential impacts to land use and planning within the Sphere of Influence to less than significant levels.

Alternative 2 is similar to the Preferred Alternative relative to potential impacts to land uses. The land uses proposed under Alternative 2 complement the existing land uses and would not divide an established community. In addition, Alternative 2 does not conflict with the established CVMSHCP. With the adoption of a master plan for the Sphere of Influence, potential impacts will be reduced. Implementation of mitigation measures for Alternative 2 will reduce land uses impacts to level below significance.

J. Mineral Resources

The La Quinta General Plan Update Planning Area falls within the MRZ-1 and MRZ-3 mineral resource zones. More than half of the City, and all of the Sphere of Influence, fall within MRZ-1. This mineral zone includes areas where little likelihood exists for presence of significant mineral resources. Incorporated lands within MRZ-1 are mostly built out, however vacant parcels still exist. The Sphere of Influence is mostly agricultural development, and will most likely develop into non-agricultural uses in the future. Future development within the MRZ-1, however, will have a less than significant impact on mineral resources.

The far western portion of incorporated La Quinta falls within MRZ-3, which includes areas containing known or inferred mineral deposits of undetermined mineral resource significance. The majority of the MRZ-3 falls within protected open space, and remaining land is mostly already developed. There are no locally important mineral resource extraction facilities in these areas.

Existing land uses under the 2002 General Plan do not allow for mineral extraction under all alternatives. The MRZ-3 zone is the only area where potential mineral resources exists, and these areas are, for the most part, developed or designated as protected as open space. The Preferred Alternative, along with the three other Alternatives, continue to provide open space across much of MRZ-3, and promote similar development patterns across the remaining mineral resource zones. Each Alternative, therefore, will have comparable impacts on mineral resources. The MRZ-3 area is the only area within the Planning Area where significant mineral resources potentially exist, however due to the fact that these areas are protected as open space, or are mostly built out, the impacts on mineral resources by each Alternative is less than significant.

K. Noise

As discussed in Section III-K, a comprehensive noise impact study was prepared to analyze potential noise impacts associated with build out of the Preferred Alternative, and to assess the relative noise impacts of each of the other development scenarios. The entire report is included in Appendix F of this EIR. The following table summarizes the results. The study analyzed roadway links in the planning area, and projected CNEL noise levels at 100 feet from the roadway centerline for each project alternative.

Table V-19
Year 2035 Preferred Alternative Noise Contour Comparison

Roadway	Segment	CNEL at 100 Feet (dBA)			
		No Project Alternative	Preferred Alternative	Alternative 1	Alternative 2
Washington St.	n/o Fred Waring Dr.	72.7	72.7	72.8	72.8
Washington St.	btwn Fred Waring & Miles	73.2	73.3	73.2	73.3
Washington St.	btwn Miles & Hwy 111	72.5	72.5	72.5	72.6
Washington St.	btwn Hwy 111 & Avenue 48	72.9	73.0	73.0	73.0
Washington St.	btwn Avenue 48 & Eisenhower Dr	73.0	72.3	73.0	73.0
Washington St.	btwn Eisenhower Dr & Avenue 50	71.5	71.7	71.5	71.6
Washington St.	btwn Avenue 50 & Calle Tampico	70.8	70.9	70.8	70.8
Eisenhower Dr.	btwn Washington St & Avenue 50	68.1	68.1	68.1	68.1
Eisenhower Dr.	btwn Avenue 50 & Calle Tampico	66.7	66.6	66.6	66.6
Avenida Bermudas	btwn Calle Tampico & Avenue 52	59.2	59.1	59.1	59.1
Avenida Bermudas	btwn Avenue 52 & Calle Durango	63.7	63.6	63.6	63.6
Adams St.	btwn Westward Ho Dr & Hwy 111	66.5	66.6	66.6	66.7
Adams St.	btwn Hwy 111 & Avenue 48	66.9	66.8	66.8	66.9
Dune Palms Rd.	btwn Westward Ho Dr & Hwy 111	65.4	65.5	65.5	65.7
Dune Palms Rd.	btwn Hwy 111 & Avenue 48	66.7	66.7	66.8	66.7
Jefferson St.	n/o Fred Waring	70.4	70.4	70.5	70.5
Jefferson St.	btwn Fred Waring & Miles	71.7	71.8	71.8	71.8
Jefferson St.	btwn Miles & Westward Ho Dr	72.2	72.2	72.3	72.3
Jefferson St.	btwn Westward Ho Dr & Hwy 111	72.2	72.2	72.3	72.3
Jefferson St.	btwn Hwy 111 & Avenue 48	72.1	72.1	72.2	72.3
Jefferson St.	btwn Avenue 48 & Avenue 50	72.6	72.7	72.7	72.8
Jefferson St.	btwn Avenue 50 & Avenue 52	71.1	71.1	71.1	71.3
Jefferson St.	btwn Avenue 52 & Avenue 54	70.6	70.7	70.6	70.7
Madison St.	btwn Avenue 50 & Avenue 52	70.5	70.4	70.5	70.5
Madison St.	btwn Avenue 54 & Airport Blvd	71.9	72.0	71.9	72.0
Madison St.	btwn Airport Blvd & Avenue 58	70.7	70.8	70.7	70.8
Madison St.	btwn Avenue 58 & Avenue 60	68.0	68.2	68.1	68.2
Monroe St.	btwn Avenue 52 & Avenue 54	70.3	70.4	70.3	70.4
Monroe St.	btwn Avenue 54 & Airport Blvd	70.5	70.6	70.4	70.7
Jackson St.	btwn Avenue 54 & Airport Blvd	70.1	70.0	69.9	70.1
Jackson St.	btwn Airport Blvd & Avenue 58	70.2	70.2	70.0	70.4
Jackson St.	btwn Avenue 58 & Avenue 60	69.3	69.5	69.5	69.7
Jackson St.	btwn Avenue 60 & Avenue 62	68.0	68.3	68.2	68.4
Van Buren St.	btwn Avenue 52 & Avenue 54	69.8	70.0	69.6	70.2
Van Buren St.	btwn Avenue 54 & Airport Blvd	69.1	69.0	68.8	69.1
Van Buren St.	btwn Airport Blvd & Avenue 58	69.4	69.3	69.2	69.4
Van Buren St.	btwn Avenue 58 & Avenue 60	69.5	69.4	69.3	69.3

Table V-19
Year 2035 Preferred Alternative Noise Contour Comparison

Roadway	Segment	CNEL at 100 Feet (dBA)			
		No Project Alternative	Preferred Alternative	Alternative 1	Alternative 2
Van Buren St.	btwn Avenue 60 & Avenue 62	66.0	65.8	65.7	65.8
Harrison St.	btwn Airport Blvd & Avenue 58	73.4	73.7	73.6	73.8
Avenue 44	e/o Washington St	71.9	72.0	72.0	72.1
Miles Ave.	e/o Washington St	66.5	66.6	66.5	66.6
Hwy 111	e/o Washington St	75.5	75.4	75.5	75.6
Hwy 111	e/o Adams St	74.3	74.2	74.6	74.7
Hwy 111	e/o Dune Palms	75.2	75.2	75.2	75.4
Avenue 48	e/o Washington St	67.0	67.0	67.0	67.1
Avenue 48	w/o Jefferson St	70.1	70.0	70.1	70.1
Avenue 50	e/o Washington St	64.4	64.4	64.4	64.4
Avenue 50	w/o Jefferson St	67.2	67.0	67.1	67.1
Avenue 50	e/o Jefferson St	69.6	69.7	69.7	69.7
Calle Tampico	btwn Eisenhower Dr & Avenida Bermudas	61.9	61.9	61.9	61.9
Calle Tampico	btwn Avenida Bermudas & Washington St	64.7	64.7	64.7	64.7
Avenue 52	w/o Washington St	66.7	66.7	66.7	66.7
Avenue 52	w/o Jefferson St	70.0	70.1	70.0	70.1
Avenue 52	e/o Jefferson St	69.7	69.7	69.6	69.8
Avenue 52	e/o Madison St	69.2	69.2	69.3	69.3
Avenue 54	e/o Jefferson St	69.8	69.9	69.8	70.0
Avenue 54	w/o Madison St	62.4	62.4	62.4	62.4
Airport Blvd.	e/o Madison St	67.3	67.3	67.0	67.4
Avenue 58	w/o Monroe St	63.3	63.8	63.4	63.9
Avenue 58	e/o Monroe St	65.6	66.0	65.6	66.1
Avenue 60	e/o Madison St	63.5	64.9	64.6	65.1
Avenue 60	e/o Monroe St	65.0	65.3	65.0	65.4
Avenue 62	btwn Madison St & Monroe St	64.2	64.3	64.1	64.4
Avenue 62	e/o Monroe St	67.5	67.5	67.4	67.4
Avenue 62	e/o Jackson St	63.4	63.7	63.6	63.6
Avenue 62	e/o Van Buren St	59.9	60.1	59.9	59.8
Source: City of La Quinta General Plan Update Noise Element Technical Report”, prepared by Urban Crossroads, Inc., June 3, 2011					
1. A significant impact is considered both a level above 65 dBA CNEL and an increase greater than 3.0 dBA.					

Noise levels along approximately 55 roadway segments in the Planning Area are projected to exceed the 65 dBA CNEL at 100 feet from the roadway centerline at build out of the Preferred Alternative. As discussed in Section III-K, the Preferred Alternative is not expected to result in increases in noise levels over existing conditions that are perceptible (equal to or greater than 3 dBA) along any roadway segments in the planning area.

No Project Alternative

As shown in the table above, noise levels along approximately 54 roadway segments in the Planning Area are projected to exceed the 65 dBA CNEL at 100 feet from the roadway centerline at build out of the No Project Alternative. This is only one road segment less than the Preferred Alternative. Noise levels along 21 evaluated roadway segments under the No Project Alternative are expected to be less than the Preferred Alternative. These noise reductions are less than 3 dBA, which are barely perceptible to the human ear. Noise levels along 4 roadway segments are expected to be greater than the Preferred Alternative, however, these differences are still less than 3 dBA, which are considered imperceptible. Finally, noise levels along 23 roadway segments at build out of the No Project Alternative are expected to be the same as those projected for the Preferred Alternative. Overall, the noise levels for the No Project Alternative are similar to noise levels projected under the Preferred Alternative. The same mitigation measures, including requirements for acoustical analysis for project occurring along impacted roadways, would apply for all alternatives, and would reduce impacts to less than significant levels.

Alternative 1

The Alternative 1 is expected to increase average noise levels by approximately 0.04 dBA CNEL over the No Project Alternative. Along 29 roadway segments, increased noise levels are expected to be higher than the No Project Alternative, however this noise increase will be less than 3 dBA, which is imperceptible to land uses.

As compared with the Preferred Alternative, Alternative 1 is expected to decrease average noise levels by approximately 0.02 dBA CNEL. Along 26 roadway segments, Alternative 1 will result in noise levels that are less than those projected for the Preferred Alternative, however these noise level changes are less than 3 dBA, which are considered imperceptible. Alternative 1 will result in noise levels that are the same along 22 of the evaluated roadway segments compared to the Preferred Alternative. Alternative 1 will result in noise levels that are higher along 18 of the evaluated roadway segments compared to the Preferred Alternative. Along all roadway segments, decreased noise levels are expected to be imperceptible compared to the Preferred Alternative.

Alternative 1 is expected to result in increased noise levels along 8 roadway segments as compared with the Preferred Alternative. Of these, increases along one of the roadway segments would be considered potentially audible. The same mitigation measures, including requirements for acoustical analysis for project occurring along impacted roadways, would apply for all alternatives, and would reduce impacts to less than significant levels.

Alternative 2

Alternative 2 will result in an average increase of approximately 0.1 dBA CNEL over the No Project Alternative. Alternative 2 is projected to result in a maximum increase in noise level of only 1.5 dBA CNEL over the No Project Alternative, which includes the location along Avenue 60, east of Madison Street. Along 47 roadway segments, increased noise levels are expected to be higher than the No Project Alternative, however this noise increase will be less than 3 dBA, which is imperceptible to land uses. Alternative 2 is expected to result in noise impacts that are the same as

those of the No Project Alternative along 16 of roadway segments evaluated, and decreased noise levels along 3 roadway segments.

Compared to the Preferred Alternative, Alternative 2 is expected to result in noise impacts that are similar to the Preferred Alternative along 23 of roadway segments evaluated. Noise levels along 38 roadway segments under Alternative 2 are projected to exceed those of the Preferred Alternative, which includes a noise level increase of 0.7 dBA along Washington Street, between Avenue 48 and Eisenhower Drive. Noise levels that are less than those expected by the Preferred Alternative are projected along 5 roadway segments, however, the differences are expected to be imperceptible.

Noise increases equal to or greater than 3 dBA more than the Preferred Alternative are not projected to occur along any of the evaluated roadway segments. Therefore, the noise impacts associated with Alternative 2 are similar to the Preferred Alternative. The same mitigation measures, including requirements for acoustical analysis for project occurring along impacted roadways, would apply for all alternatives, and would reduce impacts to less than significant levels.

Overall, noise impacts will be less, when compared to the Preferred Alternative, under the No Project Alternative and Alternative 1, although the difference is not expected to be significant. Under Alternative 2, noise levels will be only marginally higher. Increases in noise levels are not expected to exceed 3 dBA among each Alternative, which is considered imperceptible and insignificant. For all the alternatives, the mitigation measures included in Section III-L would be required, and impacts would be reduced to less than significant levels at build out.

L. Population and Housing

Impacts associated with population and housing as a result of implementation of the Preferred Alternative are discussed in Section III-L. Implementation of the General Plan Update will result in growth that is consistent with growth projections within City limits, but has the potential to increase the projected population and housing unit development within the Sphere of Influence relative to existing growth projections. Therefore, the Preferred Alternative has the potential to induce substantial growth and result in significant impacts. In order to reduce potential impacts from growth and development within the Sphere of Influence, a master plan will be prepared. Adoption of such a Plan is expected to be sufficient to mitigate potential impacts from growth and development in the Sphere of Influence.

No Project Alternative

The No Project Alternative has the potential to result in the development of 43,875 dwelling units and support 111,004 residents, which is 9,228 fewer dwelling units and 23,348 fewer residents compared to the Preferred Alternative. The No Project Alternative would allow for a total of 15.28 million square feet of commercial land uses, which is 2.91 million square feet greater than the Preferred Alternative, or an increase of 24%. The No Project Alternative is consistent with current growth projections and will result in less than significant impacts to population and housing.

Alternative 1

Alternative 1 proposes 10,339 fewer dwelling units and 26,159 fewer residents compared to the Preferred Alternative. The reduction in dwelling units under Alternative 1, relative to the Preferred Alternative, is due the different dwelling unit densities proposed for the Sphere of Influence. Alternative 1 proposes 11,333 units compared to the 21,500 dwelling units proposed under the Preferred Alternative, and results in nearly doubling the potential build out population for the Sphere of Influence (a population of 28,672 under Alternative 1, compared to 54,396 under the Preferred Alternative). Alternative 1 would result in a reduction of 19% of total residential units, when compared to the Preferred Alternative. Thus, Alternative 1 is consistent with existing growth projections and impacts are expected to be less than significant.

Alternative 2

The Planning Area will experience a greater intensity of development under the More Intense Alternative when compared to the Preferred Alternative. Alternative 2 would allow for the development of up to 57,058 dwelling units, which could accommodate a population size of 144,357 residents at build out, consisting of 80,715 people within City limits and 63,642 people within the Sphere of Influence. When compared to the Preferred Alternative, Alternative 2 proposes 3,955 additional dwelling units and approximately 10,005 additional residents.

As with the Preferred Alternative, Alternative 2 is consistent with growth projections within City limits, but exceeds growth projections in the Sphere of Influence. Due to the projected population size for the Sphere of Influence the More Intense Project Alternative has the potential to result in significant impacts to population and housing. In order to mitigation potential impacts and achieve levels below significance, a master plan will be prepared. As described under the Preferred Alternative, adoption of such a Plan is expected to be sufficient to mitigate potential impacts from growth and development in the Sphere of Influence to levels below significance.

M. Public Service and Utilities

1. Schools

The estimated student enrollment at build out of each project alternative is shown in the following tables.

Table V-20
Potential School Enrollment at General Plan Build Out , No Project Alternative

Grade Level	Max. Build out Units	Student Generation Rate	Projected Enrollment
Elementary (K-6)			
Single Family	34,798	0.214	7,447
Multi-Family	9,076	0.1267	1,150
Elementary Subtotal			8,597
Middle (7-8)			
Single Family	34,798	0.1093	3,803
Multi- Family	9,076	0.0522	474
Middle School Subtotal			4,277
High School (9-12)			
Single Family	34,798	0.1427	4,966
Multi-Family	9,076	0.0543	493
High School Subtotal			5,459
Total	43,875		18,333

Source: Terra Nova Staff Estimates based on Student Generation Rates, Desert Sands Unified School District Master Facilities Plan, October 2008.

Table V-21
School Enrollment at General Plan Build Out, Alternative 1

Grade Level	Max. Build out Units	Student Generation Rate	Projected Enrollment
Elementary (K-6)			
Single Family	36,636	0.214	7,840
Multi-Family	6,128	0.1267	776
Elementary Subtotal			8,617
Middle (7-8)			
Single Family	36,636	0.1093	4,004
Multi- Family	6,128	0.0522	320
Middle School Subtotal			4,324
High School (9-12)			
Single Family	36,636	0.1427	5,228
Multi-Family	6,128	0.0543	333
High School Subtotal			5,561
Total	42,764		18,501

Source: Terra Nova Staff Estimates based on Student Generation Rates, Desert Sands Unified School District Master Facilities Plan, October 2008.

Table V-22
School Enrollment at General Plan Build Out
Alternative 2

Grade Level	Max. Build out Units	Student Generation Rate	Projected Enrollment
Elementary (K-6)			
Single Family	45,032	0.214	9,637
Multi-Family	12,026	0.1267	1,524
Elementary Subtotal			11,161
Middle (7-8)			
Single Family	45,032	0.1093	4,922
Multi- Family	12,026	0.0522	628
Middle School Subtotal			5,550
High School (9-12)			
Single Family	45,032	0.1427	6,426
Multi-Family	12,026	0.0543	653
High School Subtotal			7,079
Total	57,058		23,789
Terra Nova Staff Estimates based on Student Generation Rates, Desert Sands Unified School District Master Facilities Plan, October 2008.			

Comparable tables for the Preferred Alternative, shown in Section III-M, estimate a build out student population of 23,294 in the City and Sphere combined. At build out, the No Project Alternative is expected to generate 18,333 students, which equates to 21.3% fewer students than the Preferred Alternative. By comparison, Alternative 2 would generate 23,789 students, or an increase of approximately 2.1% students over the Preferred Alternative. Estimated student generation associated with Alternative 1 will be 18,501 students, or approximately 20.6% less than the Preferred Alternative. Student generation within the Sphere is included in these estimates. Based on these figures, the student population in the Sphere would be expected to account for between 28.5% and 43.5% of the total student population for the respective alternatives.

The highest number of students will be generated by Alternative 2. Therefore, this alternative is expected to result in the greatest impact on public schools serving the Planning Area. Based on these estimates, it is anticipated that the No Project and Alternative 1 would result in the least impact on school enrollment.

Student enrollment will depend on actual development, and in any case will gradually increase as new development facilitated by implementation of the proposed General Plan builds out. As noted in Section III-M, future development will be required to offset potential impacts by paying statutory developer fees. These fees will be required of any of the development scenarios, and are expected to mitigate potential impacts to public schools to less than significant levels.

2. Libraries

Based on the County Library System's unadopted target of 2 volumes per capita, the estimated build out population of 134,352 in the planning area will require 268,704 volumes at build out of the Preferred Alternative.

As discussed in Section III-M for the Preferred Alternative, each of the alternatives will generate Developer Impact Fees (DIF) as new units are constructed to offset increased demands associated with library facilities and services. These are one-time fees, and will only be assessed at the time these units are built. DIF fees for the Preferred Alternative were estimated to be approximately \$10.2 million. Estimated fees for each Alternative are presented below.

Under any of the development scenarios, growth will occur gradually, thus incrementally increasing demand on library services and facilities. To assure that there continue to be adequate library services and facilities to serve the community, the City of La Quinta and Riverside County will need to continue to monitor library use. Mitigation measures set forth in Section III-M reduce impacts to libraries to levels below significance for all of the project alternatives.

As previously described, fiscal analyses have found that in the eastern Sphere in particular, lands have been encumbered by the County as collateral for a regional bond issue. As a result, there will be no property tax generation to the City from these lands for a number of years. The fiscal analysis concluded that the annexation of property in the Sphere would have a negative fiscal impact on the City. The General Plan includes policies that require both the preparation of fiscal impact analyses for annexation proposals, and a Development Agreement in association with annexation. The Development Agreement would establish the parameters for development, and would include mitigation fee payments for projects that are fiscally negative for the City. These Development Agreements would eliminate the potential fiscal impacts to the City under all Alternatives.

No Project Alternative

The No Project Alternative is expected to generate a build out population of approximately 111,004. Applying the County's unadopted standard of 2 volumes per capita, at build out approximately 222,008 volumes would be required to serve the population. Population within the City limits accounts for 161,566 volumes, and population within the Sphere accounts for 60,442 volumes within Sphere areas. The No Project Alternative would generate a similar demand for new library services. The No Project would require approximately 17.4% fewer volumes than the Preferred Alternative.

Based on current fees, new residential development under the No Project Alternative will generate approximately \$6.9 million in library fees.

Alternative 1

Under Alternative 1, which is expected to result in a build out population of 108,193 approximately 216,386 volumes would be needed. Of these, 159,040 would be required for the population in the City limits, and 57,344 for the population in the Sphere. The Alternative 1

would generate a similar demand for new library services. Alternative 1 will generate a demand for approximately 19.5% fewer volumes relative to the Preferred Alternative.

Alternative 1 will generate approximately \$6.53 million in DIF fees due to the proposed development set forth under Alternative 1.

Alternative 2

At build out it is estimated Alternative 2 will result in a population of 144,357 persons. This level of development would require 288,714 volumes, of which 161,430 would be needed for population in the City limits, and 127,284 for the Sphere. Alternative 2 would require approximately 7.4% more volumes than would the Preferred Alternative.

Alternative 2 will generate approximately \$11.57 million in DIF fees due to the proposed development set forth under this alternative.

3. Law Enforcement

The greatest level of additional demand for police services will be generated by Alternative 2, followed by the Preferred Alternative. The Less Intense and No Project Alternatives, respectively, will place the least additional demand on police services. The City will incur additional costs for the provision of these services, regardless of the alternative.

The need for additional police staffing will occur gradually as development builds out in the Planning Area. Section III-M sets forth mitigation measures that are intended to reduce potential impacts to less than significant levels for all alternatives.

As previously described, fiscal analyses have found that in the eastern Sphere in particular, lands have been encumbered by the County as collateral for a regional bond issue. As a result, there will be no property tax generation to the City from these lands for a number of years. The fiscal analysis concluded that the annexation of property in the Sphere would have a negative fiscal impact on the City. The General Plan includes policies that require both the preparation of fiscal impact analyses for annexation proposals, and a Development Agreement in association with annexation. The Development Agreement would establish the parameters for development, and would include mitigation fee payments for projects that are fiscally negative for the City. These Development Agreements would eliminate the potential fiscal impacts to the City under all Alternatives.

No Project Alternative

Under the No Project Alternative, the build out population will be approximately 111,004. Although, as discussed in Section III-M, there is no adopted staff-to-population standard in La Quinta, Riverside County Sheriff's Department strives for a ratio of approximately 1 officer per 1,000 population. Based on this ratio, 111 police officers will be required to serve the build out population, of which 81 will be associated with increased population in the City and 30 with the Sphere. Compared with the Preferred Alternative, the No Project Alternative requires 23 fewer Officers. This represents a decrease of approximately 17.2%.

Alternative 1

At build out the population associated with Alternative 1 will be of 108,193. This level of development will generate demand for 109 police officers, or approximately 18.7% less than the Preferred Alternative. Approximately 80 police officers would be required based on the estimated build out population in the City, and 29 would be required in the Sphere.

Alternative 2

Alternative 2 will result in a build out population of 144,357, thus requiring 145 police officers. This represents an increase of 11 officers, or an approximately 8.2% increase over the Preferred Alternative. Alternative 2 build out population in the City would require approximately 81 officers, and the Sphere would require approximately 64 officers in the total increase in staffing.

4. Fire Protection

As discussed in Section III-M, fire protection services are provided to the Planning Area by the Riverside County Fire Department. The County is in the process of evaluating and updating the standards by which it determines the need for additional fire staffing, equipment and facilities. Currently there are three fire stations in La Quinta, with stations in neighboring cities also available to serve the Planning Area as needed.

Based on projected build out population, it is expected that Alternative 2 will generate the greatest increased demand for fire protection services, while Alternative 1 will result in the least additional demand. Regardless of the development scenario that is implemented, additional fire protection services will be required, including personnel and equipment, and may necessitate the construction of additional fire stations. The County monitors growth within the jurisdictions it serves, and future development projects will continue to be subject to Fire Department review to ensure the adequate provision of fire protection services. Mitigation measures are set forth in Section III-M that will apply to any of the alternatives, and will reduce potential impacts associated provision of fire services to less than significant levels.

As previously described, fiscal analyses have found that in the eastern Sphere in particular, lands have been encumbered by the County as collateral for a regional bond issue. As a result, there will be no property tax generation to the City from these lands for a number of years. The fiscal analysis concluded that the annexation of property in the Sphere would have a negative fiscal impact on the City. The General Plan includes policies that require both the preparation of fiscal impact analyses for annexation proposals, and a Development Agreement in association with annexation. The Development Agreement would establish the parameters for development, and would include mitigation fee payments for projects that are fiscally negative for the City. These Development Agreements would eliminate the potential fiscal impacts to the City under all Alternatives.

5. Electricity

Projected electric power demand for the Planning Area has been estimated based on historical usage factors in La Quinta provided by IID, applied to residential, commercial, and industrial

development in the Planning Area. The following are electric consumption estimates at build out for each project alternative.

No Project Alternative

- City Limits: 1,121,724,203 kilowatt hour/year
- Sphere: 499,422,871 kilowatt hour/year
- Planning Area: 1,621,147,074 kilowatt hour/year

Alternative 1

- City Limits: 1,059,057,498 kilowatt hour/year
- Sphere: 342,918,007 kilowatt hour/year
- Planning Area: 1,401,975,505 kilowatt hour/year

Alternative 2

- City Limits: 1,094,274,318 kilowatt hour/year
- Sphere: 637,122,426 kilowatt hour/year
- Planning Area: 1,731,396,774 kilowatt hour/year

Existing and future residential, commercial and industrial development in the planning area under the Preferred Alternative is expected to generate demand for 1,645,145,600 kilowatt-hours per year at build out. By comparison, the No Project Alternative is expected to generate approximately 1.5% less demand for electricity than the Preferred Alternative. The Alternative 1 is expected to generate approximately 14.8% less demand, while Alternative 2 will generate approximately 5% greater demand than the Preferred Alternative. Estimates include both the City limits and the Sphere.

Impacts will be less than significant for any of the development scenarios.

6. Natural Gas

In Section III-M, it is estimated that development facilitated by the Preferred Alternative will consume approximately 2,238,326,502 cubic feet/year of natural gas at build out. The following estimates potential demand for natural gas for each of the project alternatives.

No Project Alternative

- City Limits: 1,467,168,248 cubic feet/year
- Sphere: X cubic 622,238,575 cubic feet/year
- Planning Area: 2,089,406,823 cubic feet/year

Alternative 1

- City Limits: 1,402,741,087 cubic feet/year
- Sphere: 469,980,612 cubic feet/year
- Planning Area: 1,872,721,699 cubic feet/year

Alternative 2

- City Limits: 1,441,566,735 cubic feet/year
- Sphere: 929,123,261 cubic feet/year
- Planning Area: 2,370,689,995 cubic feet/year

Based on the above estimates, all development associated with Alternative 2, including the City and Sphere, will consume approximately 5.6% more natural gas than the Preferred Alternative. Comparatively, the Less Intense will consume approximately 10.4% less than the Preferred Alternative, and the No Project approximately 6.7% less.

Of all the alternatives, the lowest natural gas consumption will result from Alternative 1. For any of the project alternatives, build out will occur gradually over time as development occurs. All alternatives will result in less than significant impacts.

7. Domestic Water Services

An increase in demand on water resources will result from future development associated with any of the project alternatives. Each will require the construction and expansion of facilities and infrastructure to serve new development. The analysis provided in Section III-M considers in detail the existing conditions associated with water resources and water quality. It also discussed potential impacts associated with the Preferred Alternative. Estimated water consumption for each alternative is shown in Section V-P below.

8. Wastewater Collection and Treatment

Potential wastewater generation in the Planning Area is estimated for the Preferred Alternative in Section III-M. The estimated wastewater generation for the Preferred Alternative at build out is projected to be approximately 4.4 million gallons per day within City limits and 3.0 million gallons per day within the Sphere. Thus, the total wastewater generation within the Planning Area is estimated to be 7.4 million gallons per day.

The wastewater generation rate for each Alternative is assumed to be equal to the potable water demand that is projected to be generated, see Table V-23 through V-25. These projections assume an average water demand of approximately 69.3 gallons per capita per day in 2010 and are projected to average 55.44 gpcd at build out. Based on these assumptions, the estimated wastewater generation for each of the alternatives at build out is shown below.

No Project Alternative

- City: 4,478,610 gallons/ day
- Sphere: 1,675,452 gallons/day
- Planning Area: 6,154,062 gallons/day

Alternative 1

- City: 4,408,589 gallons/ day
- Sphere: 1,589,576 gallons/day
- Planning Area: 5,998,165 gallons/day

Alternative 2

- City: 4,474,840 gallons/ day
- Sphere: 3,528,312 gallons/day
- Planning Area: 8,003,152 gallons/day

The highest volume of wastewater generation is expected to result from Alternative 2, approximately 7% more than the Preferred Alternative. The least wastewater generation is expected for Alternative 1; this alternative will generate 19.5% less than the Preferred Alternative. The No Project Alternative will generate approximately 17.4% less wastewater than the Preferred Alternative.

The greatest demand on wastewater collection and treatment facilities will come from Alternative 2. The least wastewater-generating alternatives are the No Project and Alternative 1s.

Regardless of which alternative is implemented, future development will place additional demands on these facilities. The City and Coachella Valley Water District will need to continue to monitor growth and plan for new facilities. Potential impacts will be reduced to less than significant levels with the application of mitigation measures set forth in Section III-M; these measures will apply to any of project alternatives.

11. Solid Waste Management

Section III-M provides estimates of solid waste generation for the Preferred Alternative. The Preferred Alternative is estimated to generate approximately 139,181.08 tons of solid waste annually at build out.

Estimated solid waste for each of the project alternatives at General Plan build out is shown in the following tables.

Table V-23
Estimated Solid Waste Generation for La Quinta Planning Area
No Project

Land Use Type	Generation Rate	Unit Type	Units (DU/Sq. Ft.)	Annual Tons of Solid Waste
Single Family	2.0400	tons/unit/year	34,798	70,988.74
Multi Family	1.1700	tons/unit/year	9,076	10,619.15
Retail/Commercial ¹	0.0024	tons/sf/year	15,275,317	36,660.76
Industrial	0.0108	tons/sf/year	0	0.00
Total				118,268.65

¹ Assumes development of all General, Tourist and Village Commercial based on retail/commercial factor. Source: Terra Nova staff estimates based on California Integrated Waste Management Board compilation of waste generation rates. Rates used are from Ventura County Solid Waste Management Department, "Guidelines for Preparation of Environmental Assessments of Solid Waste Impacts", September 1992, and "DEIR for North Hills Development in Santa Clarita", December 1991.

Table V-24
Solid Waste Generation for Planning Area
Alternative 1

Land Use Type	Generation Rate	Unit Type	Units (DU/Sq. Ft.)	Annual Tons of Solid Waste
Single Family	2.04	tons/unit/year	36,636	74,737.44
Multi Family	1.17	tons/unit/year	6,128	7,169.76
Retail/Commercial ¹	0.0024	tons/sf/year	11,199,642	26,879.14
Industrial	0.0108	tons/sf/year	611,393	6,603.04
Total				115,389.39

¹ Assumes development of all General, Tourist and Village Commercial based on retail/commercial factor. Source: Terra Nova staff estimates based on California Integrated Waste Management Board compilation of waste generation rates. Rates used are from Ventura County Solid Waste Management Department, "Guidelines for Preparation of Environmental Assessments of Solid Waste Impacts", September 1992, and "DEIR for North Hills Development in Santa Clarita", December 1991..

Table V-25
Solid Waste Generation for Planning Area
Alternative 2

Land Use Type	Generation Rate	Unit Type	Units (DU/Sq. Ft.)	Annual Tons of Solid Waste
Single Family	2.0400	tons/unit/year	45,032	91,865.28
Multi Family	1.1700	tons/unit/year	12,026	14,070.42
Retail/Commercial ¹	0.0024	tons/sf/year	12,742,826	30,582.78
Industrial	0.0108	tons/sf/year	611,393	6,603.04
Total				143,121.53

¹Assumes development of all General, Tourist and Village Commercial based on retail/commercial factor.
Source: Terra Nova staff estimates based on California Integrated Waste Management Board compilation of waste generation rates. Rates used are from Ventura County Solid Waste Management Department, "Guidelines for Preparation of Environmental Assessments of Solid Waste Impacts", September 1992, and "DEIR for North Hills Development in Santa Clarita", December 1991.

The tables above show estimates for existing and future development within the City and Sphere. Based on these estimates, it is expected that the No Project alternative will generate approximately 15.0% less solid waste than the Preferred Alternative. The Less Intense will generate approximately 17.1% less than the Preferred; the More Intense will generate approximately 2.8% more solid waste than the Preferred Alternative.

It should be noted that although each of the development scenarios will contribute to the waste stream, the mitigation measures set forth in Section III-M are applicable to any of the alternatives. With the implementation of these measures, potential impacts are expected to be reduced to less than significant levels, regardless of the alternative that is implemented.

N. Recreational Resources

The City of La Quinta has established criteria, based on the Quimby Act, for dedicating land for parks or payment of in lieu fees for new recreational resources. Residential projects containing more than five parcels are required to pay a park development fee or dedicate three acres of land for parks per one thousand people in a new subdivision.

Under the Preferred Alternative, build out of the General Plan Update will result in a population of 79,956 people and require 240 acres of parks and recreational facilities within the city limits. Within the Sphere of Influence, build out under the Preferred Alternative will create a population of 54,396 people, and require 163 acres of parks and recreational facilities. In total, the Preferred Alternative will create a population of 134,352 at build out, and will require the development of 403 acres of recreational resources.

No Project Alternative

Build out under the No Project Alternative is expected to provide 31,930 residential units, and create a population of 80,783 within the City. Under these circumstances, the No Project Alternative will require approximately 242 acres of parkland in the City. This represents less

than 1% increase in both population and the amount of parkland needed in the City over the Preferred Alternative. Therefore, the impact on recreational resources under the No Project Alternative will be slightly higher than the Preferred Alternative within the City Limit.

In regards to the Sphere of Influence, the No Project Alternative is expected to provide 11,945 dwelling units, creating a population of 30,221 people. The Sphere of Influence will require approximately 91 acres of parkland and recreational opportunities. This represents a 43% decrease in population and recreational demand over the Preferred Alternative. Therefore, impacts on recreational resources under the No Project Alternative will be significantly less than the Preferred Alternative within the Sphere of Influence.

Overall, the No Project Alternative will create a population of 111,004, and will require 333 acres set aside for recreational resources. The No Project Alternative, therefore, will have slightly less impact on recreational resources than the Preferred Alternative.

Alternative 1

Implementation of Alternative 1 is expected to provide for 31,431 residential units, and create a total population of 79,520 within the City. This will create a need for 239 acres of parks and recreation resources. This represents a less than 1% decrease in population and recreational resource demand over the Preferred Alternative. Alternative 1 will, therefore, have slightly lower impacts on recreational resources than the Preferred Alternative within the City.

Within the Sphere of Influence, Alternative 1 is expected to provide 11,333 residential units, creating a population of 28,672 people. This will require 86 acres of parkland and recreational resources. This represents a 47% decrease in population and recreation resource demand over the Preferred Alternative. Impacts to recreational resources under Alternative 1, therefore, will be lower than the Preferred Alternative within the Sphere of Influence.

Overall, Alternative 1 will create a population of 108,193, and will require 325 acres to be set aside for recreational resources. Alternative 1, therefore, will have the lowest impact on recreational resources than all the alternatives.

Alternative 2

Alternative 2 is expected to provide 31,903 residential units, creating a population of approximately 80,715 people in the City. This population will require 242 acres to be set aside for parks and recreation. This represents a less than 1% increase in population and recreational resource demand over the Preferred Alternative. Therefore, the impact on recreational resources under Alternative 2 will be only marginally higher than the Preferred Alternative within the City.

In regards to the Sphere of Influence, Alternative 2 is expected to provide up to 25,155 residential units, creating a population of 63,642 people. This population will require 191 acres of parkland and recreational resources. This represents a 17% increase in population and recreation resource demand over the Preferred Alternative. Impacts to recreational resources under Alternative 2, therefore, will be slightly higher than the Preferred Alternative within the Sphere of Influence.

Overall, Alternative 2 will create a population of 144,357, and will require 433 acres set aside for recreational resources. Alternative 2, therefore, will have greater impact on recreational resources than the Preferred Alternative.

O. Transportation/Traffic

The purpose of this discussion is to analyze and compare the traffic impacts associated with each of the alternative projects. As discussed at the beginning of this section, the No Project Alternative is the build out of the current City General Plan. This analysis also examines the consequences of two other alternative land use allocation models. The Preferred Alternative calls for 53,103 dwelling units and 12.4 million square feet of commercial and industrial. The socio-economic data for the Preferred Alternative total 134,352 residents and 33,780 jobs. Also see Section III-O of this EIR for a detailed analysis of the transportation consequences of the Preferred Alternative. **Table V-26** provides a summary of the Preferred Land Use Plan, 2002 General Plan, Alternative 1, and Alternative 2 attributes.

**Table V-26
Comparison of Land Use Alternatives**

Attribute	Preferred Alternative	No Project Alternative	Alternative 1	Alternative 2
Total Population	134,352	111,004	108,193	144,357
Total Employment	33,780	32,041	32,194	34,507
Total Intersection Delay (a.m. peak hour)	4,919.3	4,502.2	4,721.1	5,045.4
Total Intersection Delay (p.m. peak hour)	7,802.0	7,571.8	7,673.2	7,907.9

Notes:

Delay = Average Vehicle Delay (Seconds)

Build out of this Preferred Alternative is forecast to result in peak season cumulative intersection delays, at the 37 study intersections, totaling 4,919 seconds during the a.m. peak period and 7,802 seconds during the p.m. peak period. Please note that this analysis for all alternatives assumes the build out of roadway improvements set forth in the 2002 General Plan.

No Project Alternative

Build out of the No Project (2002 General Plan) Alternative would result in total a.m. peak hour volumes at the study intersections that are approximately 3% lower than result from build out of the Preferred Alternative. The 2002 General Plan total p.m. peak hour volumes are forecast to be approximately 1% lower than the Preferred Alternative.

The total a.m. peak hour delay at the study intersections in the 2002 General Plan is forecast to be approximately 8% lower than the Preferred Alternative. The total p.m. peak hour delay at the study intersections in the 2002 General Plan is forecast to be approximately 3% lower than the Preferred Land Use Plan, with 4,502.2 seconds of delay during the AM peak and 7,571.8 seconds of delay during the PM peak. Detailed forecast year 2035 with the No Project Alternative levels of service at the study intersections are shown in **Table V-27**. Measured as a function of

intersection delay, the No Project Alternative is modestly (2.9%) superior to the Preferred Alternative and superior to both Alternatives 1 and 2.

Alternative 1

Upon build out of Alternative 1, total a.m. peak hour volumes at the study intersections are forecast to be approximately 2% lower than in the Preferred Alternative. The Alternative 1 total p.m. peak hour volumes are forecast to be approximately 1% lower than the Preferred Alternative. The total a.m. peak hour delay at the study intersections in Alternative 1 is forecast to be approximately 4% lower than the Preferred Alternative. The total p.m. peak hour delay at the study intersections in Alternative 1 is forecast to be approximately 2% lower than the Alternative, with 4,721.1 seconds of delay during the AM peak and 7,673.2 seconds of delay during the PM peak. Detailed forecast year 2035 with Alternative 1 levels of service at the study intersections are shown in **Table V-28**. below. Measured as a function of intersection delay, Alternative 1 is modestly (1.6%) superior to the Preferred Alternative, inferior to the No Project Alternative and superior to Alternative 2.

Alternative 2

Upon build out of Alternative 2 total a.m. and p.m. peak hour volumes at the study intersections are both forecast to be approximately 1% higher than the Preferred Alternative. The total a.m. peak hour delay at the study intersections in Alternative 2 is forecast to be approximately 3% higher than the Preferred Alternative. The total p.m. peak hour delay in Alternative 2 is forecast to be approximately 1% higher than the Preferred Alternative, with 5,045.4 seconds of delay during the AM peak and 7,907.9 during the PM peak. Detailed forecast year 2035 with Alternative 2 levels of service at the study intersections are shown in **Table V-29**. below. Measured as a function of intersection delay, Alternative 2 is modestly (1.3%) inferior to the Preferred Alternative, and inferior to the No Project Alternative and Alternative 1.

Alternatives Impact Summary

The analysis of overall intersection delays is an effective measure of the relative environmental superiority or inferiority of the various land use alternatives analyzed. As is evident from the above analysis, the project alternatives vary by less than 4% and less in most cases. While the No Project Alternative is superior to the others, this alternative does not achieve the goals and objectives of the project as well as the Preferred Alternative. In all cases, impacts associated with traffic would be significant and unavoidable.

Table V-27
No Project Alternative Forecast Year 2035 Peak Season
With Adopted General Plan Network Modified * Peak Hour Intersection LOS

Intersection	Traffic Control	AM Peak Hour			PM Peak Hour		
		LOS	Delay (Sec)	V/C	LOS	Delay (Sec)	V/C
1. Washington St & Fred Waring Dr	Signal	F	95.7	1.181	F	160.2	1.456
2. Washington St & Miles Ave	Signal	D	43.3	0.964	F	111.9	1.264
3. Washington St & Channel Dr	Signal	B	13.3	0.677	C	24.2	0.876
4. Washington St & Hwy 111	Signal	F	89.0	1.161	F	159.4	1.405
5. Washington St & Ave 48	Signal	F	92.1	1.160	D	50.1	1.037
6. Washington St & Eisenhower Dr	Signal	D	37.1	0.860	D	36.9	0.882
7. Washington St & Ave 50	Signal	F	84.1	1.048	F	204.0	1.411
8. Washington St & Calle Tampico	Signal	B	19.7	0.522	C	23.1	0.527
9. Washington St & Ave 52	Signal	F	110.1	1.160	F	99.8	1.111
10. Eisenhower Dr & Calle Tampico	Signal	C	22.5	0.385	C	24.5	0.440
11. Avenida Bermudas & Ave 52	Signal	C	26.8	0.679	C	26.9	0.223
12. Adams St & Fred Waring Dr	Signal	D	47.0	0.988	E	78.3	1.125
13. Adams St & Miles Ave	Signal	C	33.8	0.724	E	73.8	1.071
14. Adams St & Hwy 111	Signal	C	33.1	0.731	D	37.9	0.886
15. Adams St & Ave 48	Signal	D	44.5	0.884	E	64.5	1.009
16. Dune Palms Rd & Fred Waring Dr	Signal	C	28.0	0.741	F	85.5	1.178
17. Dune Palms Rd & Miles Ave	Signal	D	35.7	0.710	D	49.3	0.947
18. Dune Palms Rd & Westward Ho Dr	Signal	C	31.1	0.706	D	40.8	0.936
19. Dune Palms Rd & Hwy 111	Signal	C	32.0	0.642	D	45.5	0.970
20. Dune Palms Rd & Ave 48	Signal	D	38.0	0.826	E	59.1	1.024
21. Jefferson St & Fred Waring Dr	Signal	D	37.7	0.857	E	56.8	1.070
22. Jefferson St & Hwy 111	Signal	D	36.0	0.818	F	89.7	1.120
23. Jefferson St & Ave 48	Signal	D	52.0	0.995	F	86.8	1.170
24. Jefferson St & Ave 49	Signal	B	18.1	0.613	B	16.4	0.693
25. Jefferson St & Ave 50	Signal	D	51.0	0.995	F	107.3	1.261
26. Jefferson St & Ave 52	Roundabout	B	14.4	-	F	153.5	-
27. Jefferson St & Ave 54	AWSC	F	385.0	2.262	F	570.7	2.690
28. Madison St & Ave 50	AWSC	F	454.5	2.497	F	732.1	3.231
29. Madison St & Ave 52	AWSC	F	382.3	2.313	F	580.8	2.821
30. Madison St & Ave 54	AWSC	F	513.0	3.475	F	747.5	4.778
31. Madison St & Ave 58	AWSC	F	289.7	1.936	F	569.2	2.787
32. Madison St & Ave 60	AWSC	F	158.1	1.492	F	290.6	1.976
33. Monroe St & Ave 52	AWSC	F	336.5	2.052	F	582.6	2.703
34. Monroe St & Ave 54	AWSC	F	442.0	2.563	F	628.1	3.024
35. Monroe St & Ave 58	AWSC	F	261.4	1.957	F	437.0	2.432
36. Monroe St & Ave 60	AWSC	F	82.0	1.224	F	310.2	1.861
37. Monroe St & Ave 62	AWSC	D	31.6	0.880	F	156.8	1.435
Total Delay (sec)		4,502.2			7,571.8		

Notes:

HCM 2000 Operations Methodology; AWSC = All-way Stop-controlled. **BOLD** indicates unsatisfactory level of service. LOS = Level of Service, Delay = Average Vehicle Delay (Seconds), V/C = Volume-to-Capacity Ratio.

*Washington Street downgraded to a 6-lane facility from Highway 111 to Avenue 48. No other modifications to the currently adopted General Plan roadway network were made.

Table V-28
Alternative 1 Forecast Year 2035 Peak Season
With Adopted General Plan Network Modified * Peak Hour Intersection LOS

Intersection	Traffic Control	AM Peak Hour			PM Peak Hour		
		LOS	Delay (Sec)	V/C	LOS	Delay (Sec)	V/C
1. Washington St & Fred Waring Dr	Signal	F	98.5	1.202	F	160.4	1.445
2. Washington St & Miles Ave	Signal	D	44.8	0.972	F	104.7	1.239
3. Washington St & Channel Dr	Signal	B	13.3	0.677	C	24.2	0.877
4. Washington St & Hwy 111	Signal	F	88.5	1.149	F	163.5	1.409
5. Washington St & Ave 48	Signal	F	88.9	1.150	D	54.2	1.050
6. Washington St & Eisenhower Dr	Signal	D	35.8	0.851	D	35.3	0.871
7. Washington St & Ave 50	Signal	E	76.8	1.026	F	229.7	1.476
8. Washington St & Calle Tampico	Signal	B	19.7	0.526	C	23.2	0.513
9. Washington St & Ave 52	Signal	F	113.9	1.168	F	96.2	1.093
10. Eisenhower Dr & Calle Tampico	Signal	C	22.5	0.383	C	24.7	0.436
11. Avenida Bermudas & Ave 52	Signal	C	26.4	0.679	C	26.9	0.221
12. Adams St & Fred Waring Dr	Signal	D	47.5	1.006	F	83.8	1.140
13. Adams St & Miles Ave	Signal	C	34.1	0.729	F	82.1	1.110
14. Adams St & Hwy 111	Signal	C	33.1	0.735	D	36.7	0.877
15. Adams St & Ave 48	Signal	D	44.1	0.880	D	54.3	0.947
16. Dune Palms Rd & Fred Waring Dr	Signal	C	28.8	0.816	F	84.4	1.173
17. Dune Palms Rd & Miles Ave	Signal	D	35.9	0.715	D	46.7	0.925
18. Dune Palms Rd & Westward Ho Dr	Signal	C	31.4	0.725	D	45.6	0.969
19. Dune Palms Rd & Hwy 111	Signal	C	32.1	0.651	D	47.2	0.984
20. Dune Palms Rd & Ave 48	Signal	D	37.8	0.824	E	75.6	1.085
21. Jefferson St & Fred Waring Dr	Signal	D	37.6	0.852	D	50.0	1.016
22. Jefferson St & Hwy 111	Signal	D	36.3	0.844	F	90.9	1.132
23. Jefferson St & Ave 48	Signal	E	56.1	1.028	F	81.3	1.148
24. Jefferson St & Ave 49	Signal	B	17.9	0.634	B	16.1	0.686
25. Jefferson St & Ave 50	Signal	D	50.4	0.990	F	101.1	1.228
26. Jefferson St & Ave 52	Roundabout	C	18.7	-	F	143.6	-
27. Jefferson St & Ave 54	AWSC	F	377.9	2.095	F	584	2.786
28. Madison St & Ave 50	AWSC	F	456	2.566	F	707.5	3.162
29. Madison St & Ave 52	AWSC	F	386.5	2.243	F	559	2.764
30. Madison St & Ave 54	AWSC	F	555	3.772	F	717.2	4.572
31. Madison St & Ave 58	AWSC	F	316.6	1.839	F	568.9	2.677
32. Madison St & Ave 60	AWSC	F	250.5	2.45	F	460.8	3.284
33. Monroe St & Ave 52	AWSC	F	345.5	2.012	F	586.7	2.82
34. Monroe St & Ave 54	AWSC	F	453.1	2.468	F	615.6	3.005
35. Monroe St & Ave 58	AWSC	F	261	1.846	F	437.7	2.552
36. Monroe St & Ave 60	AWSC	F	112.4	1.352	F	305.3	1.975
37. Monroe St & Ave 62	AWSC	E	35.7	0.907	F	148.1	1.401
Total Delay (sec)		4,721.1			7,673.2		

Notes:

HCM 2000 Operations Methodology; AWSC = All-way Stop-controlled. **BOLD** indicates unsatisfactory level of service. LOS = Level of Service, Delay = Average Vehicle Delay (Seconds), V/C = Volume-to-Capacity Ratio.

*Washington Street downgraded to a 6-lane facility from Highway 111 to Avenue 48. No other modifications to the currently adopted General Plan roadway network were made.

Table V-29
Alternative 2 Forecast Year 2035 Peak Season
With Adopted General Plan Network Modified * Peak Hour Intersection LOS

Intersection	Traffic Control	AM Peak Hour			PM Peak Hour		
		LOS	Delay (Sec)	V/C	LOS	Delay (Sec)	V/C
1. Washington St & Fred Waring Dr	Signal	F	102.0	1.227	F	171.6	1.476
2. Washington St & Miles Ave	Signal	D	49.2	0.997	F	109.6	1.251
3. Washington St & Channel Dr	Signal	B	13.3	0.677	C	24.5	0.880
4. Washington St & Hwy 111	Signal	F	95.3	1.191	F	161.1	1.410
5. Washington St & Ave 48	Signal	F	96.7	1.178	D	50.8	1.040
6. Washington St & Eisenhower Dr	Signal	D	38.1	0.867	D	37.4	0.887
7. Washington St & Ave 50	Signal	F	86.2	1.060	F	202.9	1.408
8. Washington St & Calle Tampico	Signal	B	19.4	0.530	C	22.9	0.523
9. Washington St & Ave 52	Signal	F	131.7	1.220	F	101.4	1.106
10. Eisenhower Dr & Calle Tampico	Signal	C	22.6	0.386	C	24.6	0.439
11. Avenida Bermudas & Ave 52	Signal	C	26.0	0.678	C	26.9	0.221
12. Adams St & Fred Waring Dr	Signal	D	50.8	1.043	F	83.0	1.141
13. Adams St & Miles Ave	Signal	C	35.0	0.746	E	75.7	1.077
14. Adams St & Hwy 111	Signal	C	33.6	0.750	D	38.0	0.888
15. Adams St & Ave 48	Signal	D	48.1	0.909	E	63.2	1.005
16. Dune Palms Rd & Fred Waring Dr	Signal	C	29.7	0.839	F	97.2	1.223
17. Dune Palms Rd & Miles Ave	Signal	D	36.5	0.733	D	51.5	0.964
18. Dune Palms Rd & Westward Ho Dr	Signal	C	32.1	0.748	D	44.0	0.962
19. Dune Palms Rd & Hwy 111	Signal	C	32.5	0.659	D	45.1	0.962
20. Dune Palms Rd & Ave 48	Signal	D	39.8	0.844	E	64.1	1.048
21. Jefferson St & Fred Waring Dr	Signal	D	38.9	0.886	E	66.9	1.129
22. Jefferson St & Hwy 111	Signal	D	36.7	0.847	F	93.0	1.161
23. Jefferson St & Ave 48	Signal	E	64.0	1.075	F	96.6	1.219
24. Jefferson St & Ave 49	Signal	B	17.8	0.654	B	16.4	0.700
25. Jefferson St & Ave 50	Signal	E	56.1	1.028	F	112.1	1.276
26. Jefferson St & Ave 52	Roundabout	D	29.3	-	F	156.7	-
27. Jefferson St & Ave 54	AWSC	F	405.1	2.166	F	577.2	2.635
28. Madison St & Ave 50	AWSC	F	485.3	2.664	F	760.4	3.203
29. Madison St & Ave 52	AWSC	F	424.4	2.346	F	579.8	2.818
30. Madison St & Ave 54	AWSC	F	588.1	3.908	F	747.4	4.793
31. Madison St & Ave 58	AWSC	F	339.9	1.942	F	590.7	2.719
32. Madison St & Ave 60	AWSC	F	259.8	2.467	F	475.2	3.379
33. Monroe St & Ave 52	AWSC	F	375.7	2.097	F	585.6	2.714
34. Monroe St & Ave 54	AWSC	F	488.1	2.579	F	635	3.033
35. Monroe St & Ave 58	AWSC	F	258.5	1.81	F	429.1	2.529
36. Monroe St & Ave 60	AWSC	F	127.2	1.439	F	335.3	2.015
37. Monroe St & Ave 62	AWSC	D	31.9	0.863	F	155	1.391
Total Delay (sec)		5,045.4			7,907.9		

Notes:

HCM 2000 Operations Methodology; AWSC = All-way Stop-controlled. **BOLD** indicates unsatisfactory level of service.

LOS = Level of Service, Delay = Average Vehicle Delay (Seconds), V/C = Volume-to-Capacity Ratio.

*Washington Street downgraded to a 6-lane facility from Highway 111 to Avenue 48. No other modifications to the currently adopted General Plan roadway network were made.

P. Water Resources & Quality

Section III-P of this EIR analyzes potential impacts to water resources and water quality that may arise from implementation of the La Quinta General Plan. As described therein, adherence to regional, state, and federal standards and regulation as well as the implementation of mitigation measures, impacts to water resources and quality will be reduced to levels below significance. Implementation of the proposed General Plan Update will not violate any water quality standards or waste discharge requirements, and will not substantially deplete groundwater supplies or interfere with recharge. Sections III-H and V-H, hydrology, further address water resources as they relate to drainage and stormwater flows.

As described in Section III-P, build out of the Preferred Alternative is projected to generate a water demand of 37,783 acre-feet within City limits and 16,684 acre-feet within the Sphere. As such, the entire Planning Area is projected to generate a build out water demand of 54,467 acre-feet per year under the Preferred Alternative. At build out of the Preferred Alternative, land uses within City limits will generate an annual water demand of 0.47 acre-feet per person, or approximately 420 gallons per capita per day (gpcd), and land uses within the Sphere will generate approximately 0.31 acre-feet per year per person, or 277 gallons per day per capita. To estimate the water demand generated by each of the Alternatives, a water demand factor for each land use type by unit, square feet, or acreage was derived from Appendix A of the Water Supply Study and applied accordingly to each land use type set forth under each Alternative. Detailed calculations to estimate the water demand generated by each Alternative is provided below.

No Project Alternative

Impacts to water resources and water quality under the No Project Alternative will be similar to the Preferred Alternative. Within City limits, the No Project Alternative proposes an additional 327 dwelling units and an additional 481,479 square feet of commercial relative to what is proposed under the Preferred Alternative. As such, there is the potential for slightly more impacts to water resources and quality under the No Project Alternative within City limits. The Sphere for the No Project Alternative proposes 9,555 fewer dwelling units and an additional 2.4 million square feet of commercial relative to what is proposed under the Preferred Alternative. As such, there is the potential for slightly less impacts to water resources and quality under the No Project Alternative within the Sphere. Mitigation measures and adherence to water quality standards and regulation will assure that impacts are reduced to less than significant impacts.

As seen in the Table below, the No Project Alternative is projected to generate an annual water demand of 37,770 acre-feet at build out within City limits and 8,416 acre-feet within the Sphere. This equates to a per capita water demand of 0.47 acre-feet (420 gpcd) within City limits and 0.28 acre-feet (250 gpcd) within the Sphere. As proposed, the No Project Alternative will generate a water demand that is comparable to what is projected for the City limits and half of what is projected for the Sphere relative to the Preferred Alternative.

**Table V-30
No Project Alternative Water Demand**

	Landscaping (Acre-feet)	Potable (Acre-feet)	Total Water Demand (Acre-feet)
City Limits			
Low Density Residential	9,549	5,040	14,588
Medium/High Density Residential	1,398	946	2,345
Commercial	521	1,426	1,947
Major Community Facilities	218	68	286
Open Space - Natural	N/A	N/A	N/A
Open Space- Recreation	18,971	N/A	17,682
Streets, Sidewalks, Medians	922	N/A	922
City Limit Total			37,770
Sphere			
Low Density Residential	4,799	1,324	6,123
Medium/High Density Residential	406	577	983
Commercial/Industrial	297.90	582.74	881
Major Community Facilities	74.53	31.29	106
Streets, Sidewalks, Medians	324.17	N/A	324
Sphere Total			8,416
Planning Area			
Low Density Residential	14,348	6,363	20,711
Medium/High Density Residential	1,804	1,523	3,327
Commercial/Industrial	819	2,009	2,827
Major Community Facilities	292	100	392
Open Space - Natural	N/A	N/A	N/A
Open Space- Recreation	18,971	N/A	17,682
Streets, Sidewalks, Medians	1,247	N/A	1,247
Planning Area Total			46,186

Alternative 1

Impacts to water resources and water quality under Alternative 1 will be similar to the Preferred Alternative. Within City limits, Alternative 1 proposes 172 fewer dwelling units and a reduction of 456,491 square feet of commercial relative to what is proposed under the Preferred Alternative. As such, slightly decreased impacts to water resources and quality are expected to occur under Alternative 1 within City limits.

The Sphere for Alternative 1 proposes 10,167 fewer dwelling units and a reduction of 708,498 square feet of commercial relative to what is proposed under the Preferred Alternative. Therefore, there is the potential for slightly less impacts to water resources and quality under Alternative 1 within the Sphere. Mitigation measures and adherence to water quality standards and regulation will assure that impacts are reduced to less than significant impacts.

The table below shows the projected water demand that will be generated at build out of Alternative 1. Within City limits, the annual water demand is projected to be 37,578 acre-feet, which is comparable to the water demands generated by the Preferred Alternative. Within the Sphere the annual water demand under Alternative 1 is projected to be 9,183 acre-feet per year, which is 45% less than what is projected under the Preferred Alternative. Water demands of Alternative 1 are projected to generate a per capita water demand of 0.47 acre-feet per year (420 gpcd) for City limits and 0.32 acre-feet per year (282 gpcd) for the Sphere.

**Table V-31
Alternative 1 Water Demand**

	Landscaping (Acre-feet)	Potable (Acre-feet)	Total Water Demand (Acre-feet)
City Limits			
Low Density Residential	9,127	4,817	13,944
Medium/High Density Residential	1,572	1,064	2,637
Commercial	472	1,294	1,766
Major Community Facilities	477	150	626
Open Space - Natural	N/A	N/A	N/A
Open Space- Recreation	17,682	N/A	17,682
Streets, Sidewalks, Medians	922	N/A	922
City Limit Total			37,578
Sphere			
Low Density Residential	6,544	1,805	8,349
Medium/High Density Residential	6	8	13
Commercial/Industrial	152	298	450
Major Community Facilities	32	14	46
Streets, Sidewalks, Medians	324	N/A	324
Sphere Total			9,183
Planning Area			
Low Density Residential	15,671	6,622	22,294
Medium/High Density Residential	1,578	1,072	2,650
Commercial/Industrial	624	1,591	2,216
Major Community Facilities	509	163	673
Open Space - Natural	N/A	N/A	N/A
Open Space- Recreation	17,682	N/A	17,682
Streets, Sidewalks, Medians	1,247	N/A	1,247
Planning Area Total			46,760

Alternative 2

Impacts to water resources and water quality under Alternative 2 will be similar to the Preferred Alternative. Within City limits, Alternative 2 proposes 300 additional dwelling units and an addition of 14,915 square feet of commercial relative to what is proposed under the Preferred Alternative. As such, slightly greater impacts to water resources and quality are expected to occur under Alternative 2 within City limits.

The Sphere for Alternative 2 proposes 3,655 additional dwelling units and an additional 363,280 square feet of commercial relative to what is proposed under the Preferred Alternative. Therefore, there is the potential for slightly greater impacts to water resources and quality under Alternative 2 within the Sphere. Mitigation measures and adherence to water quality standards and regulation will assure that impacts are reduced to less than significant impacts.

As seen in the Table below, Alternative 2 is projected to generate an annual water demand of 37,919 acre-feet at build out within City limits and 16,846 acre-feet within the Sphere. This equates to a per capita water demand of 0.47 acre-feet (420 gpcd) within City limits and 0.27 acre-feet (241 gpcd) within the Sphere. As proposed, Alternative 2 will generate a water demand that is comparable to what is projected under the Preferred Alternative for City limits and the Sphere.

**Table V-32
Alternative 2 Water Demand**

	Landscaping (Acre-feet)	Potable (Acre-feet)	Total Demand (Acre-feet)
City Limits			
Low Density Residential	9,268	4,892	14,160
Medium/High Density Residential	1,593	1,078	2,671
Commercial	497	1,360	1,857
Major Community Facilities	477	150	626
Open Space - Natural	N/A	N/A	N/A
Open Space- Recreation	17,684	N/A	17,682
Streets, Sidewalks, Medians	922	N/A	922
City Limit Total			37,919
Sphere			
Low Density Residential	11,186	3,086	14,272
Medium/High Density Residential	649	922	1,571
Commercial/Industrial	214	419	632
Major Community Facilities	32	14	46
Streets, Sidewalks, Medians	324	N/A	324
Sphere Total			16,846
Planning Area			
Low Density Residential	20,455	7,977	28,432
Medium/High Density Residential	2,242	2,000	4,242
Commercial/Industrial	711	1,779	2,489
Major Community Facilities	509	163	673
Open Space - Natural	N/A	N/A	N/A
Open Space- Recreation	17,684	N/A	17,682
Streets, Sidewalks, Medians	1,247	N/A	1,247
Planning Area Total			54,764

E. Environmentally Superior Alternative

CEQA requires that the analysis of alternatives include a conclusion as to which alternative is environmentally superior. Based on the analysis in this Section of the EIR, and when compared to that provided in Section III, all the alternatives will have similar impacts on aesthetics, agricultural resources, biological resources, cultural resources, geology and soils, and hydrology. Impacts associated with issue areas directly tied to development, including air quality, noise, public facilities, water resources and traffic, will be lower under the No Project Alternative and Alternative 1, and equal or higher under the Alternative 2.

For air quality impacts, where the impacts have been determined to remain significant and unavoidable under the Preferred Alternative, even after the implementation of all feasible mitigation measures, none of the alternatives would reduce all these impacts to less than significant levels. The No Project (2002 General Plan) alternative, would have the least

significant amount of emissions, but would still have significant impacts to air quality. As regards GHG impacts, the No Project alternative has the greatest potential for impacts, since it is the only alternative where the City's Greenhouse Gas Reduction Plan would not be implemented, since annexation would not occur. All other alternatives would reduce GHG impacts to less than significant levels with implementation of the Greenhouse Gas Reduction Plan.

Traffic impacts remain significant and unavoidable under the Preferred Alternative. Traffic impacts associated with all the alternatives would result in significant and unavoidable impacts under all alternatives, although the No Project Alternative would be marginally better than the others.

In the overall, the No Project Alternative would have lesser impacts on the environment, and would represent the environmentally superior alternative. The No Project Alternative can be considered in this case, because it would result in development under the 2002 General Plans of the City and the County, and is not a No Project/No Development alternative.

However, the General Plan Update was undertaken because the 2002 General Plan no longer meets the community's needs and goals. Therefore, the No Project Alternative would not meet the Project Objectives established in this Section. Alternative 1 would be the next most superior alternative.

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VI. SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

Introduction

This section of the EIR weighs the proposed short-term uses of the environment relative to the maintenance and enhancement of long-term productivity and justifies adoption and implementation of the La Quinta General Plan Update. The focus is on areas of impact that ultimately limit the range of beneficial uses of the environment, pose long-term health and safety risks, or result in long-term impacts to nonrenewable resources. Areas of concern include agricultural resources, biological resources, air and water resources, geophysical conditions, and visual resources.

Agricultural Resources

Land use designations within the City do not provide for agricultural activities. The adoption of the General Plan Update will have no immediate effect on agricultural resources. Implementation of the General Plan Update will, however, result in the long term removal of agricultural resources from the Planning Area. The General Plan Update allows for the increased urban development through the intensification of residential and commercial development, and to a lesser degree, industrial development within the Sphere of Influence.

Undeveloped portions the Sphere are located in areas designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland or Lands of Statewide Importance, according to the Riverside County Important Farmland Map of 2008. In 2008, there were approximately 1,700 acres of important agricultural land located in the City, and 7,391 acres in the Sphere of Influence, for a total of 9,091 acres. The lands within the City have been designated for urban uses for many years, and are not in agriculture currently. Some of the 7,391 acres in the Sphere are currently being farmed, and some are vacant desert, or have been developed for residential uses.

There are currently over 545,000 acres of important farmland in Riverside County¹. The 7,391 acres of land designated as important farmland represents 1.3% of the total important farmland in the County. The eventual loss of these lands will not significantly impact agriculture in the region.

¹ California Department of Conservation, Division of Land Resource Protection. 2008-2010 Land Use Conversion inventory.

Biological Resources

Implementation of the La Quinta General Plan Update will facilitate growth and development throughout the Planning Area, which will affect biological resources in the short term and degrade the long-term productivity of natural communities. Construction activities, including grubbing, clearing, grading, paving, and building development, as well as increased operational use, will result in the degradation and loss of natural habitat, thereby impacting natural communities. Furthermore, the introduction of non-native and invasive species associated with development and urbanization could substantially alter the desert environment.

As discussed in Section III, the General Plan Update has the potential to impact state or federal listed threatened or endangered species, or special status species including two plant species, Glandular Dittaxis and California Dittaxis (*Dittaxis serrata* var. *californica*), the Coachella Valley Fringe-Toed Lizard, Desert tortoise, Le Conte's Thrasher, Burrowing Owl, and Peninsular Bighorn Sheep. That being said, the General Plan Update does include a natural open space land use designation that will preserve undisturbed lands within the Planning Area. Furthermore, the General Plan Update is consistent with the regional habitat conservation plan.

The Coachella Valley Multiple Species Habitat Conservation Plan (MSHCP) sets forth the preservation of lands for long term management and monitoring. The MSHCP allows for the incidental take of listed species for specific covered activities and assures protection of important habitat. The MSHCP identifies critical habitat throughout the Coachella Valley, including the Santa Rosa and San Jacinto Mountains Conservation Area.

The General Plan Update includes goals, policies and programs that are consistent with the MSHCP and assures protection the Santa Rosa and San Jacinto Mountains Conservation Area. Increased development and urbanization within the Planning Area will contribute to the reduction of natural habitat and associated biological resources. The La Quinta General Plan Update provides designated open space lands that will be preserved in perpetuity, and limits densities and allowable land uses in proximity to Conservation Areas. The General Plan Update is consistent with the MSHCP and will facilitate the protection of sensitive species in areas designated as critical and sensitive habitat. Although the General Plan Update will result in short term impacts in the form of incidental take, habitat degradation, and land conversion, the long-term goals of habitat preservation, species protection, and connectivity are achieved by complying with the MSHCP.

Air Quality

Air quality is a regional concern caused by increased urban development, industry, and vehicular traffic. The Planning Area is located within the Salton Sea Air Basin (SSAB) and is managed by the South Coast Air Quality Management District (SCAQMD). As development within the SSAB continues, new sources of air quality emissions will result from a variety of activities including grading and construction, increased vehicle emissions from traffic, and increased usage of natural gas and electricity for operation of buildings and facilities, and other anthropogenic sources. Air emissions from outside the SSAB, including the neighboring South Coast Air Basin to the west, also continue to contribute to air quality conditions within the SSAB.

The General Plan Update will facilitate urban development throughout the Planning Area, thereby contributing to increased air quality emissions throughout the SSAB. Existing vacant and agricultural land, particularly within the Sphere of Influence, will transition to urban uses, thereby increasing emissions from construction activities, energy use, and traffic. Construction activities will result in elevated levels of NO_x and ROG's from off-road equipment, and will increase the amount of particulate matter during grading and site disturbance. Increased vehicular traffic will also result in elevated levels of carbon monoxide, NO_x, ROG's, and particulate matter from ongoing operation. In the short-term, emissions levels and impacts to air quality will continue to rise until new transportation methods, development standards, and combustion technology develop.

The General Plan Update provides goals, policies, and programs to reduce and mitigate against criteria pollutants and greenhouse gas emissions. In addition, the City has prepared a GHG Reduction Plan to reduce GHG emissions to levels that are consistent with Assembly Bill 32. Long term productivity of air quality resources are expected to be preserved through successful implementation of the GHG Reduction Plan.

Water Resources

As discussed in Section III of this EIR, the Coachella Valley Water District (CVWD) provides water services in to the La Quinta Planning Area. Domestic water supplies are produced from groundwater extracted from the Whitewater River Subbasin. Implementation of the General Plan Update is expected to increase water demand by approximately 22,000 acre-feet per year at build out. CVWD's service area, including the La Quinta Planning Area, is expected to continue to generate a growing demand for water. Through conjunctive use management, conservation, and other strategies CVWD expects to have sufficient water supplies to serve the General Plan Update Planning Area and surrounding region through 2035 and beyond, including during normal, single, and multiple dry year conditions.

The proposed General Plan Updates includes policies and programs intended to promote and support the conservative use of water resources including requiring water efficient appliances, advanced irrigation control for outdoor landscaping, and the use of drought tolerant planting materials. In addition, CVWD is expanding recycled water supplies and provides large scale irrigator, such as golf courses with reclaimed water in lieu of groundwater for irrigation purposes. Although these and other water resources programs conserve water and reduce groundwater extraction in the short term, factors, such as periodic drought conditions in California, and the potential for reduced Colorado River imports, continue to affect the availability of domestic water resources for future development. As such, continued growth in the Valley, including implementation of the General Plan update in combination with drought years, could potentially impact water resources and compromise the long term productivity of groundwater supplies.

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VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF ENVIRONMENTAL RESOURCES

Pursuant to CEQA Section 15126.2(c), the following discussion addresses the potentially significant irreversible changes or irretrievable commitment of non-renewable resources that could occur from implementation of the General Plan Update. In general non-renewable resources imply energy resources, but may also pertain to the permanent loss of biological, mineral and other natural resources. The use of non-renewable resources during short-term construction and long-term operation of the Planning Area may be irreversible and irretrievable.

The growth and development facilitated by the proposed General Plan Update will result in the irretrievable and irreversible commitment of renewable and non-renewable natural resources, including open land, biological and energy resources (i.e., oil, natural gas, petroleum, coal, etc.), water resources, mineral resources, and construction materials such as lumber, gravel, sand, asphalt, and metals.

As the Planning Area continues to build out as a result of implementation of the General Plan Update, environmental resources will be irretrievably lost. Undisturbed habitat, open space and other biological will be committed to urban land uses. Most notably, new residential subdivisions and commercial centers will be developed on vacant land within the Sphere of Influence.

New growth and development throughout the Planning Area will increase consumption of electricity, natural gas, and petroleum fuels. Mineral resources will also be consumed in the construction of buildings, roads, and facilities across the Planning Area. Local quarries in the Coachella Valley provide aggregate, sand and gravel, and crushed stone used for the construction of roads, sidewalks and hardscape, as well as plaster used for building facades. Increased construction facilitated by the General Plan Update will contribute to the irretrievable commitment of these resources.

The General Plan Update establishes the regulatory framework and proposes land use intensities and densities that are intended to preserve and protect valuable resources and reduce long-term impacts to environmental resources. Furthermore, the Plan is consistent with the Coachella Valley MSHCP and prohibits development within the MSHCP Conservation Areas.

The General Plan Update provides goals, policies and programs intended to conserve and protect valuable resources and substantially reduce long-term impacts. The Sustainable Community Element identifies the approach to reduce the Planning Area's irreversible or irretrievable use of non-renewable resources, thereby limiting air quality emissions and water pollution. The Greenhouse Gas Reduction Plan also provides strategies for reducing greenhouse gas emissions and achieving reduction targets consistent with state goals as set forth in AB32.

This EIR sets forth mitigation measures, the implementation of which will reduce potential impacts associated with the proposed General Plan to less than significant levels for non-renewable environmental resources.

Finally, outside influences, such as the development of new and more efficient technologies are anticipated to reduce impacts on fossil fuel resources and other finite mineral resources. These efforts will minimize the irreversible or irretrievable loss of environmental resources, even as growth continues.

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VIII. GROWTH INDUCEMENT AND CUMULATIVE IMPACTS

The CEQA Guidelines, Section 15126.2(d) state that growth-inducing impacts include projects that foster economic or population growth, or the construction of housing, either directly or indirectly, in the surrounding environment. Increased population may create impacts to existing community facilities or require the construction of new facilities that could cause significant environmental effects. This section discusses growth-inducing impacts caused by the La Quinta General Plan Update, and how these impacts may encourage and facilitate other activities that could cumulatively affect the environment, or induce growth.

A. Growth Inducement

Adoption of the La Quinta General Plan Update will not directly induce growth. Rather, implementation of the General Plan through future development could be growth inducing. Although the General Plan Update will not result in any construction project, it facilitates development, thereby inducing growth. The General Plan Update will induce growth through implementation of the proposed land use designations and densities, the development of new and widened roadways, and the expansion of infrastructure.

The General Plan will allow for growth and development on lands currently governed by the 2002 La Quinta Comprehensive General Plan and the Riverside County General Plan. The proposed La Quinta General Plan Update allows for approximately 8,114 new residential units, including 4,751 Low Density Residential and 3,362 Medium/High Density Residential units on vacant or un-developed lands throughout the City. This could support an estimated 20,528 people, assuming an average household occupancy of 2.53. As discussed in Section III, however, this increase is less than projected by the existing 2002 General Plan, and consistent with SCAG forecasts for growth in the City. As such, the General Plan Update is not expected to result in significant growth inducing impacts within City limits.

The General Plan Update allows for the development of up to 20,699 residential dwelling units, including 20,480 Low Density Residential and 219 Medium/High Density Residential on lands that are currently vacant or used for agricultural production within the Sphere of Influence. The vast majority of these units will occur in the eastern Sphere. These units would result in a build out population size of 52,368 within the Sphere at 100% occupancy. In comparison, were the Sphere of Influence to build out under the current County land use designations, a total of 11,946 residential units would be developed. This would yield a population of 30,222. Implementation of the General Plan Update would increase the population within the Sphere of Influence by 22,146 people. Therefore, the General Plan Update has the potential to induce growth and result in a substantial increase to the population size within the Sphere of Influence.

Lands in the eastern Sphere will continue to develop at densities assigned by the County General Plan. Only if the lands are annexed would the City's General Plan be applied to these lands. The General Plan includes a requirement for master planning of the eastern Sphere, to address the land use distribution and allocation in the Vista Santa Rosa area. This master plan is to be undertaken prior to annexation of this area, to give future projects clear direction on the character, intensity and density of the area. The master plan may result in reduced densities and land use intensities, which will lower the ultimate number of units possible in this area, should it be annexed. Such a reduction would also reduce the ultimate population of the area.

The development of new commercial and industrial lands facilitated by the General Plan Update will increase the number of jobs available within the Planning Area. The General Plan Update proposes new commercial and industrial lands within the City limits and the Sphere of Influence. Overall, the proposed General Plan allows for approximately 5,676,835 square feet of new commercial square footage, 3,218,039 square feet of which will occur within the City limits and 2,458,797 square feet within the Sphere of Influence. This is slightly less than anticipated by the 2002 General Plan and the Riverside County Vista Santa Rosa land use plan. The General Plan Update also calls for 611,408 square feet of industrial lands within the Sphere of Influence. The Vista Santa Rosa Plan does not include any industrial land use designation. The commercial and industrial lands proposed within the Planning Area as part of the General Plan Update have the potential to induce growth by attracting employees to these commercial and industrial projects, and therefore increasing the demand for housing. As most commercial development results from an increase in residential units, it is likely that much of the potential employee pool will occupy the new units created by implementation of the General Plan.

New construction in the City and Sphere will also likely spur demand for construction and landscape contractors. It is anticipated that local contractors residing in the Coachella Valley will benefit from these activities, particularly since construction of projects will occur over time, not all at once.

An existing roadway network currently serves the General Plan Update Planning Area, including areas within the Sphere of Influence. This roadway network is well developed in the City, but will need expansion (widening and additional traffic control) in the Sphere of Influence. New roadways developed throughout the Planning Area will primarily be internal to developing properties, such as new local streets within new residential subdivisions. Improvements to major arterials and collectors will occur as development occurs, and through capital improvement

programs implemented by the City and County. Appropriate phasing of roadway improvements will ensure optimal expansion and efficient development of roadways.

As described above, the new commercial and industrial development proposed by the General Plan Update has the potential to increase the number of jobs available to City residents. This increase in employment opportunities may reduce the trip length of commuting residents, who currently travel outside the Planning Area for employment. At the same time, however, new commercial and industrial development may also result in increased trip lengths for residents living outside the Planning Area.

The General Plan Update will create growth-inducing impacts from the expansion of infrastructure, including electric, gas, water, sanitary sewer, and telecommunication services. The City is well served by existing utilities and infrastructure; however, the Sphere of Influence will require substantial infrastructure improvements, especially sanitary sewer services. Existing utility infrastructure will need to be extended to serve future residents in portions of the Planning Area not currently served by utilities. Service extensions for water and sewer will be required of development projects in their conditions of approval, and will not occur without these projects. The bulk of the costs associated with the improvements will be borne by the developers, and not by the service providers.

B. Cumulative Impacts

As set forth in Section 15130 of the CEQA Guidelines, EIRs are required to discuss cumulative impacts when a project's incremental effect is cumulatively considerable, as defined in section 15065(a)(3). Pursuant to Public Resources Code Section 21083 (b), and CEQA Guidelines Section 15355, a cumulative impact occurs when the incremental effect of an individual project is considerable when viewed in the context of past, existing, and forthcoming projects. When viewed in conjunction with development throughout the Coachella Valley, the La Quinta General Plan Update will result in cumulatively considerable impacts.

Adoption and implementation of the proposed General Plan Update will govern development patterns and intensity within the City limits, and should annexation occur, within the Sphere of Influence. The General Plans of the City of Indio, City of Coachella and the County of Riverside will affect development patterns on lands contiguous to the Planning Area. For the most part, the General Plans for these surrounding communities will provide similar urban and suburban land use patterns as the La Quinta General Plan Update.

The Sphere of Influence is located within the Eastern Coachella Valley Area Plan, as designated by Riverside County. Relative to the La Quinta Planning Area, the City of Palm Desert lies to the northwest, the City of Indio to the north, the City of Coachella to the northeast, unincorporated County lands to the east and south, and the City of Indian Wells to the west. Policy constraints and the need for expanded infrastructure, especially on lands to the east, are expected to have a moderating influence on permitted development by surrounding jurisdictions.

The surrounding General Plans, in conjunction with the proposed La Quinta General Plan Update, will result in cumulatively considerable impacts to Land Use, Geology and Minerals, Water Resources, Air Quality, and Traffic/Circulation.

Aesthetic/Visual Resources

The La Quinta Planning Area contains important aesthetic resources. The Planning Area is located in a flat valley surrounded by the dramatic peaks of the Santa Rosa, San Jacinto, and Little San Bernardino Mountains. These geological features define the community's character and enhance the quality of life for residents and visitors. Implementation of the General Plan Update will facilitate development within the Planning Area. However, no development will be allowed in the foothills of the Santa Rosa Mountains, located within the western portion of the Planning Area. The General Plan Update will continue to protect these dramatic backdrops through open space designations, viewshed and construction restrictions.

The General Plan Update also provides policies and programs that protect important viewsheds and preserve scenic resources. These include the maintenance of image corridors, integration of landscaping standards that incorporate the region's visual character into urban design, as well as setback and height restrictions that avoid viewshed impediment. As a result, cumulative impacts to visual resources are expected to be less than significant.

Agricultural Resources

Undeveloped portions the Sphere are located in areas designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland or Lands of Statewide Importance, according to the Riverside County Important Farmland Map of 2008. In 2008, there were approximately 1,700 acres of important agricultural land located in the City, and 7,391 acres in the Sphere of Influence, for a total of 9,091 acres.

Implementation of the General Plan Update does not require landowners to immediately convert farmland to new land uses. However, new development proposed will be required to develop according to new land use designations. As a result, agricultural lands will be affected by new development.

There are currently over 545,000 acres of important farmland in Riverside County¹. The 7,391 acres of land designated as important farmland represents 1.3% of the total important farmland in the County. The eventual loss of these lands will not cumulatively impact agriculture in the region.

Land uses within the eastern Sphere of Influence are currently governed by the County's Vista Santa Rosa Community Plan, which allows for both residential and agriculture related uses. These lands will continue under the jurisdiction of the County of Riverside until the completion of master planning for the area. The General Plan Update requires that the master planning consider the area's character. This is likely to include very low intensity development, and agricultural or ranching uses. Further, the City's Zoning Ordinance includes an

¹ California Department of Conservation, Division of Land Resource Protection. 2008-2010 Land Use Conversion inventory.

Agricultural/Equestrian Overlay which applies to all lands in the Sphere. This overlay was specifically designed to allow for the preservation of agricultural and ranching uses in the Sphere area.

Air Quality

As discussed in Section III, the La Quinta Planning Area is located within the Salton Sea Air Basin, which is managed by the South Coast Air Quality Management District(SCAQMD. The Basin is currently designated as a non-attainment area for ozone and particulate matter. The Planning Area is subject to SCAQMD's 2007 Air Quality Management Plan, which identifies strategies and measures to reduce air quality impacts.

A combination of local and regional strategies have been developed and are included within the General Plan Update in an effort to minimize or reduce air quality impacts. The City of La Quinta requires best management practices, adherence to building codes and standards, and the adoption of dust control plans for all new development. Furthermore, the City has prepared a Greenhouse Gas (GHG) Reduction Plan, as part of this General Plan Update, which identifies methods and development standards to reduce greenhouse gas emissions. Implementation of mitigation measures, including adherence to the GHG Reduction Plan is expected to substantially reduce the emission of air quality pollutants. Therefore, it is expected that with mitigation measures and successful implementation of the GHG Reduction Plan, the General Plan Update will have less than significant impacts to air quality.

However, some of the air quality reduction measures are contingent upon factors outside of the City's control. While the City is committed to achieving air quality emission reductions, increasing energy efficiency, and incorporating sustainable development principles, air quality conditions are affected by regional emissions. Although the General Plan Update is consistent with the Air Quality Management Plan and impacts to air quality will be minimized within the Planning Area, surrounding jurisdictions' build out, in conjunction with the General Plan Update will result in cumulatively considerable impacts to air quality.

Implementation of the General Plan Update has the potential to impact air quality from grading and construction activities, vehicle emissions, and daily operations, including the use of natural gas and electricity for operation of existing and new buildings and structures. Vehicular traffic emissions are projected to be the greatest source of air pollutants. These increases in air quality emissions from implementation of the General Plan Update, in combination with new growth and development within surrounding jurisdictions, has the potential to result in exceedences of criteria pollutant standards and ozone precursors. As such, the General Plan Update will have cumulatively considerable impacts to air quality.

Biological Resources

Existing urban development and agricultural uses have eliminated the majority of undisturbed lands within City. Natural habitat remains on the undevelopable and protected slopes of the Santa Rosa Mountains. In addition, there are likely pockets of sensitive habitat that remain within portions of the Planning Area, primarily within the less developed Sphere of Influence. Implementation of the General Plan Update will facilitate new growth and development on undeveloped lands that may contain sensitive habitat or species. Increased population growth as

permitted by the General Plan Update and growth expected to occur in surrounding jurisdictions will increase disturbance on open space lands from human use, vehicle travel, garbage dumping, and domestic and opportunistic animals. The introduction of non-native plants and animal species also may create adverse impacts to native species. New growth within the La Quinta Planning Area, along with development occurring in surrounding jurisdictions will contribute to the cumulative loss of sensitive habitat and associated species.

The preservation of land through designated open space areas within the Planning Area, and the Coachella Valley Multiple Species Habitat Conservation Plan will limit any cumulatively considerable regional disruption of wildlife. Policies and programs in the proposed General Plan Update include the integration of open space areas and wildlife corridors. Given that sensitive species currently occur within the planning area, development proposals will be required to adequately mitigate impacts to wildlife and habitat before development is permitted. The City's participation and enforcement of the Multiple Species Habitat Conservation Plan will reduce cumulative impacts to sensitive species, and its implementation will protect habitats for these species. These activities will reduce the cumulative impacts to biological resources to less than significant levels.

Cultural Resources

As discussed in Section III, the La Quinta Planning Area contains culturally sensitive areas. Based on past cultural surveys, a number of historic and archaeological sites associated with the Native Americans have been identified within City limits and to a lesser extent in the Sphere of Influence. The region is known to contain sensitive paleontological resources, including fossil deposits near the ancient Lake Cahuilla. The potential exists for discovering additional culturally important sites in the future. New development proposed by the General Plan Update will potentially result in the disturbance or destruction of cultural resources due to grading, site excavation, construction, and urbanization.

Policies and programs of the proposed General Plan Update are intended to protect and preserve cultural resources within the Planning Area. Cultural resource surveys will be required for proposed projects that have the potential to disturb or destroy sensitive resources. Mitigation measures proposed in this EIR will also assure protection of cultural resources. As such, no significant cumulative impacts to cultural resources are expected to result from adoption and implementation of the proposed General Plan Update.

Geology/Seismicity

The La Quinta General Plan Update Planning Area is subject to potentially moderate to severe ground shaking as a result of earthquakes along the San Andreas Fault Zone and associated faults in the surrounding area. Previous seismic events and associated ground motion in the Planning Area have been known to cause severe damage to the built environment, including structures and roadways. The Planning Area is also subject to other seismically induced hazards, including liquefaction, seismically induced settlement, rock falls and landslides. Due to soil type, depth to groundwater, and other conditions, land within the Planning Area, especially the eastern Sphere of Influence, have potential to be impacted by liquefaction. Liquefaction can cause buildings to tilt or sink. Landslide and rock fall hazards exist along the foothills at the western portion of the Planning Area. The General Plan Update will facilitate continued urbanization, increasing the

number of homes, commercial and industrial buildings susceptible to seismic hazards, thereby exposing new buildings and structures, as well as an increased number of people, to seismic related hazards.

New growth and development facilitated by the General Plan Update will be designed in accordance with policies and programs set forth in the proposed General Plan Update, as well as mitigation measures in this EIR, which will help minimize geological hazards. New buildings and facilities will also be developed in accordance with strict seismic requirements of the Uniform Building Code. New development in surrounding jurisdictions will also be required to adhere to such building codes. With the implementation of these and other appropriate design and engineering precautions for future development, no significant cumulative impacts associated with geotechnical hazards are expected to result from adoption and implementation of the proposed General Plan Update.

Hydrology

The City of La Quinta is responsible for local flood control facilities and has recently updated its Master Drainage Plan. The Coachella Valley Water District and the Riverside County Flood Control and Water Conservation District are responsible for regional drainage facilities.

Implementation of the proposed General Plan Update, as well as build out of surrounding jurisdictions, will facilitate urban development and increase impervious surfaces throughout the region. As a result, storm water runoff will increase. The La Quinta General Plan Update includes goals, policies and programs to ensure that forthcoming development recognizes and plans for flood hazards, and includes stormwater management facilities, such as on-site stormwater retention basins. Future development within surrounding jurisdictions will also be required to address the potential risk of flood hazards and require on-site stormwater retention. The City and surrounding jurisdictions currently participate in the National Pollutant Discharge Elimination System (NPDES) program. The NPDES mandates the adoption of stormwater management plans and programs to reduce runoff of pollutants into Waters of the United States. As a result, the General Plan Update in conjunction with growth and development of surrounding jurisdictions will not result in cumulatively considerable impacts to hydrology.

Land Use

The development pattern and intensity of new residential and commercial projects will be consistent with existing land use designations and densities currently found throughout the City. Through the thoughtful planning of development sites, and the integration of new projects into existing neighborhoods, impacts to land use within City will not be cumulatively significant.

Development within the Sphere of Influence will be regulated through a master plan, which will assure consistency with surrounding development intensities. As proposed, the Sphere of Influence will develop primarily as low density residential, with associated commercial, and limited industrial land uses. The intensity of development in the Sphere of Influence, however, could be significantly different from what currently exists in the area. Build out of the La Quinta General Plan Update, along with build out of the surrounding jurisdictions' General Plans mentioned above, could substantially change the existing character of the region from a rural and agricultural community to a more urbanized environment. As a result, new growth and

development facilitated by the General Plan Update could create cumulatively significant land use impacts.

Noise

The primary source of noise throughout the Planning Area is the operation of motor vehicles on City streets. Land uses adjacent to major arterials therefore experience higher noise levels. Throughout the Sphere of Influence, noise levels are generally lower due to the rural environment. Implementation of the General Plan Update will facilitate new growth and development in the Sphere of Influence and result in the intensification of land use development within City limits, thereby leading to increased traffic volumes and associated higher noise levels. In addition, construction equipment noise, and the noise generated by mechanical equipment will increase as new development and infill development occurs. The ambient noise level will rise as the General Plan Update is implemented.

The proposed General Plan Update includes a wide range of policies and programs that will reduce potential noise impacts to less than significant levels. Such policies include adherence to community noise standards, compliance monitoring, land use compatibility planning, and other noise reducing strategies. Mitigation measures provided in this EIR will also help reduce impacts from increased noise levels. Acoustical analyses may be required to properly identify, mitigate and reduce project-related noise impacts to acceptable levels.

Although cumulative noise levels are expected to rise due to regional growth and development, implementation of goals, policies and programs set forth in General Plan Update, and mitigation measures provided in this EIR will sufficiently protect sensitive receptors from noise impacts. As a result, the General Plan Update is not expected to generate cumulatively considerable noise impacts.

Public Services and Utilities

Implementation of the General Plan Update will increase the demand for public services and facilities. As development occurs throughout the Planning Area and region, the incremental and cumulative increase in population will require additional police and fire protection, school and library services, parks and recreation facilities, and public and quasi-public utilities, including electricity, natural gas, water, sanitary sewer and solid waste management.

As growth continues, public services and facilities will incur proportional increases in service demands. Public utility companies have developed rate structures to provide for the expansion of facilities as demand continues. Developer impact fees will continue to be required for new projects of all types. Fees collected are used to offset increased demands to public services and facilities by funding school expansions, roadway improvements and public buildings. Increased property tax and sales tax revenue also provide additional funding for new police and fire services.

The General Plan Update provides policies and programs that accommodate expansion of such facilities as growth continues. The General Plan Update and Greenhouse Reduction Plan, include provisions that are intended to realize increased efficiency and conservation, thereby minimizing

the demand for electricity, natural gas, and water resources, and substantially limiting the City's contribution of solid waste to landfills.

In addition to service providers' plans to accommodate increased demands, the proposed General Plan provides goals, policies and programs that will minimize cumulative impacts to public services and facilities. Therefore, cumulative impacts to public services and facilities are expected to be less than significant.

Traffic/Circulation

The consequences of General Plan build out have been evaluated for the 63 major roadway segments and 37 intersections. Based on this analysis, the proposed General Plan is projected to generate a total of approximately 635,905 average daily trips. Of these, 449,489 ADT would be generated within the City's corporate limits and 186,416 would be generated in the City Sphere-of-Influence.

Within the City's corporate limits, the proposed Land Use Plan will generate about 3.6% more traffic than build out of the 2002 General Plan. Within the City's Sphere, the proposed Land Use Plan will generate about 34% more traffic than build out of the 2002 General Plan land use designations.

The majority of the roadway segments are forecast to operate at acceptable levels of service (V/C ratios less than or equal to 0.90 or LOS D or better). Three segments are projected to operate at LOS E and three at LOS F at 2035 build out.

- Washington Street segments between Avenue 42 and Miles Avenue and between Highway 111 and Eisenhower Drive (6-lane Major Arterial) are forecast to exceed theoretical maximum carrying capacity by up to 3,000 VPD with the most problematic segment between Fred Waring Drive and Miles Avenue. LOS D service volumes are exceeded by over 9,000 VPD.
- Madison Street between Avenue 54 and Airport Boulevard (4-lane Primary Arterial) is forecast to exceed theoretical maximum carrying capacity by approximately 4,900 VPD. LOS D service volumes are exceeded by over 9,000 VPD.
- Harrison Street between Airport Boulevard and Avenue 58 (8-lane Augmented Major) is forecast to exceed theoretical maximum carrying capacity by approximately 3,800 VPD. Although the capacity of Harrison Street was assumed to be that of an Augmented Major Road (76,000 vehicles per day), it would likely operate as an Expressway due to limited accessibility compared to an Augmented Major Road, thus carrying a larger capacity. Prior study by the County raised the potential of grade-separated intersections to further enhance capacity.

Of the 37 intersections analyzed, the following four are not expected to be able to accommodate all the required build out improvements and therefore have the potential to be operating at unacceptable levels of service by 2035 General Plan build out:

- Washington Street @ Fred Waring Drive;
- Adams Street @ Miles Avenue;
- Jefferson Street @ Highway 111;
- Madison Street @ Avenue 50.

It should also be noted that three of the four impacted intersections are shared between more than one jurisdiction. For instance, the Washington Street/Fred Waring Drive intersection is located within the corporate boundaries of the cities of La Quinta, Palm Desert and Indian Wells. In these cases, close and on-going coordination between cities will be necessary to provide optimum intersection improvements and to otherwise address forecast operational deficiencies. However, even with the implementation of feasible mitigation measures, impacts will be cumulatively considerable.

Water Resources

As discussed in Section III of this EIR, the Planning Area is located in the Whitewater River Subbasin. The Whitewater Subbasin encompasses approximately 400 square miles and underlies most of the Coachella Valley. There are five subareas within the Whitewater River Subbasin, and the La Quinta Planning Area overlies the Thermal subarea, which is part of the Lower Whitewater River Subbasin.

The Coachella Valley Water District (CVWD) serves as the water provider for the La Quinta Planning Area. Implementation of General Plan Update is expected to increase water demand by approximately 22,000 acre-feet, consisting of 6,555 acre-feet within the City, and 15,416 acre-feet within the Sphere.

According to CVWD's Urban Water Management Plan, CVWD expects to have sufficient water supplies to serve the General Plan Update Planning Area and surrounding region through 2035 and beyond, including during normal, single, and multiple dry year conditions. As stated in Section III, this increased demand will be met by groundwater, imported Colorado River water, desalinated agricultural drain water, reclaimed water or a combination thereof.

Implementation of water conservation methods, including the use of water efficient appliances, and advanced irrigation control for outdoor landscaping, will help reduce water demands. The proposed General Plan Update includes policies and programs intended to promote and support the conservative use of water resources for domestic purposes uses, and to encourage the use of drought tolerant planting materials efficient irrigation systems for landscaping.

Nonetheless, factors such as periodic drought conditions in California, the potential for reduced Colorado River imports, and increasing demand for water resources associated with population growth affect the availability of water for future development. Although water demands are expected to be met at build out and beyond, the proposed General Plan Update will contribute to a reduction in groundwater in the Basin. As such, the implementation of the proposed General Plan Update in conjunction with development within surrounding jurisdictions will result in cumulatively considerable impacts to water resources.

LA QUINTA GENERAL PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT

IX. ORGANIZATIONS, PERSONS AND DOCUMENTS CONSULTED

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G. Noise Consultant

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H. Paleontologic Consultant

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I. Traffic Consultant

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J. Public Agencies

California Department of Conservation
California Department of Water Resources & Public Affairs
California Integrated Waste Management Board
Coachella Valley Unified School District
Coachella Valley Water District
Desert Recreation District
Desert Sands Unified School District
National Recycling Coalition
Riverside County Fire
Riverside County Parks
Riverside County Planning Department
South Coast Air Quality Management District
Southern California Association of Governments

K. Utilities

Burrtec
Imperial Irrigation District
Southern California Gas Company

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M. Correspondence

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N. Web Sites

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